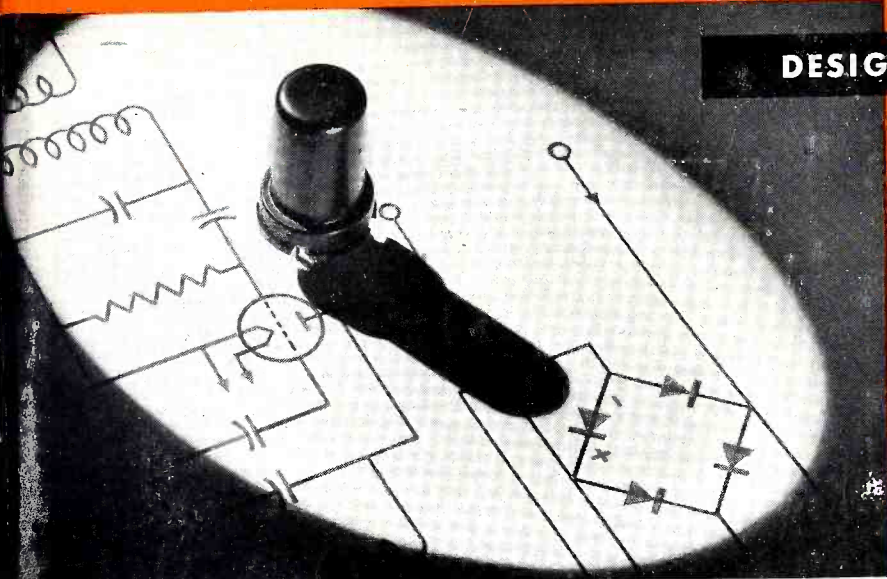


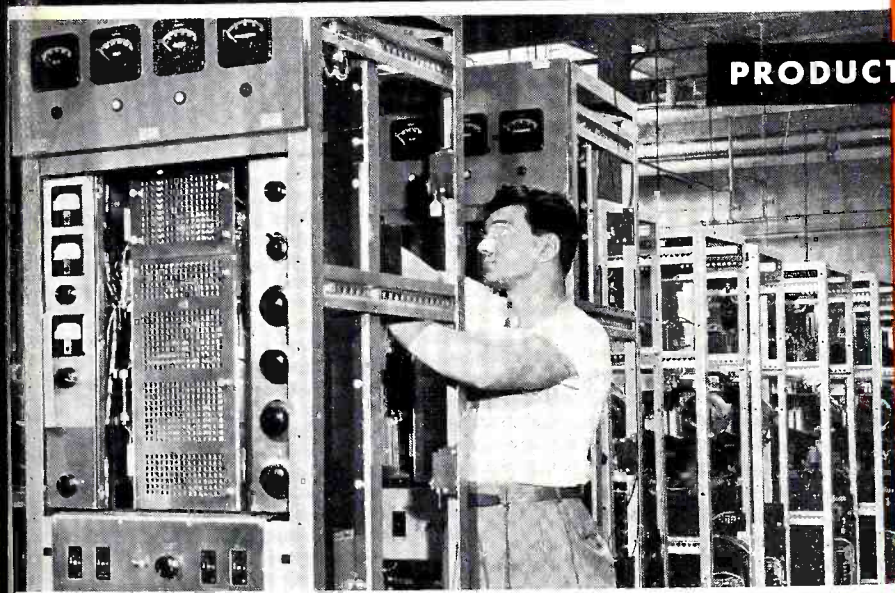
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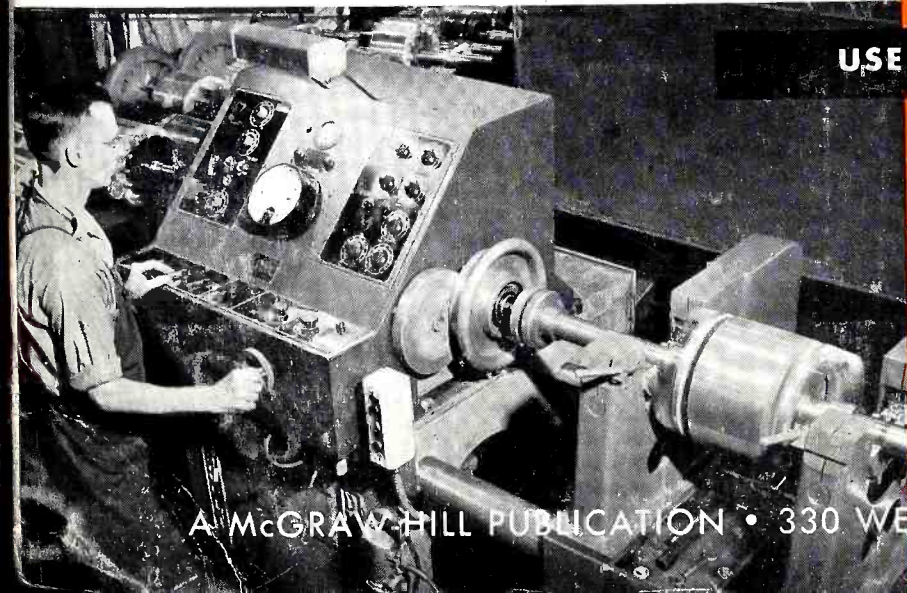
DESIGN



PRODUCTION



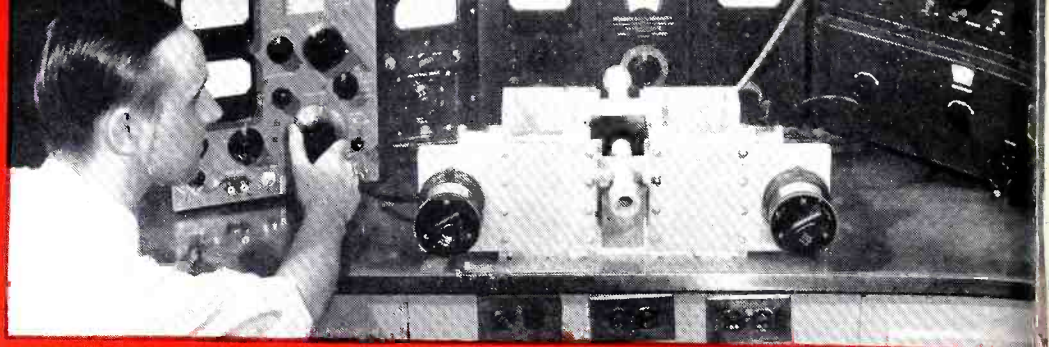
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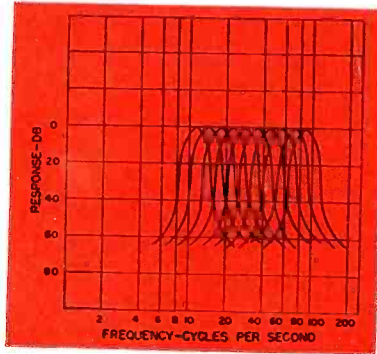
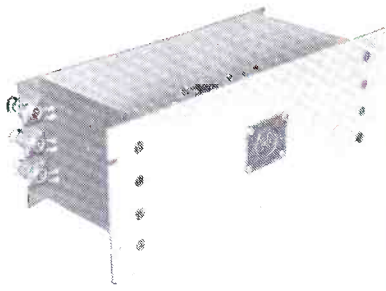
PRICE: TWO DOLLARS

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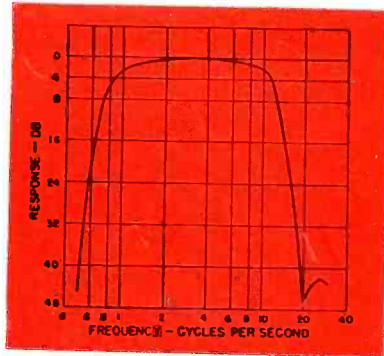


for SPECIALIZED FILTERS

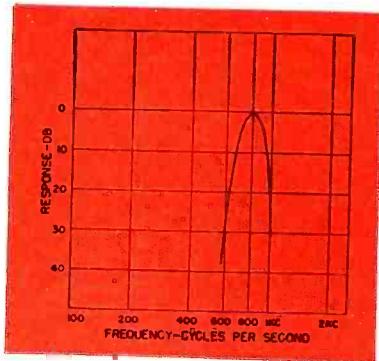
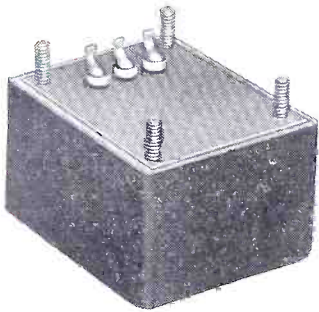
Decades of experience in the design and production of specialized filters have resulted in UTC being a first source for difficult filters. Fifteen years ago UTC was already the largest user of permalloy dust toroids in the world (exclusive of the telephone system). Present designs include a wide variety of core materials, structures, and winding methods to provide maximum performance in electrical requirements and stability. Illustrated below are a few of the thousands of special filter designs in present production.



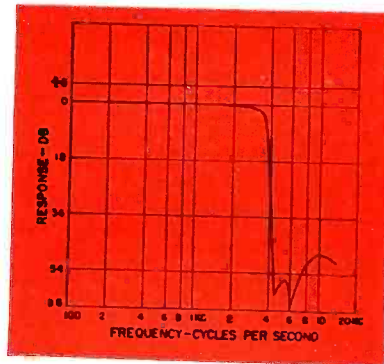
These low frequency band pass filters are held to 1 DB tolerance at the 3 DB crossover... 600 ohm... 4 filters per 7 1/2" rack panel.



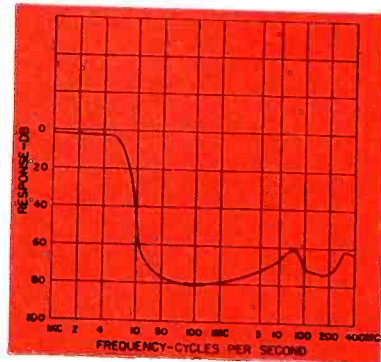
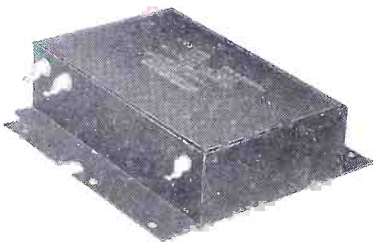
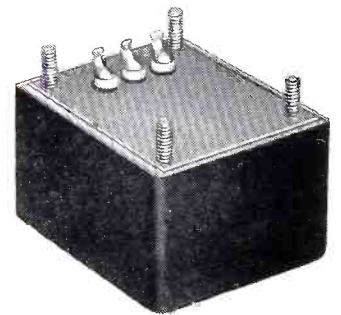
This ultra low frequency filter has a band pass range of one cycle to 10 cycles... 50,000 ohms... 700 cubic inches.



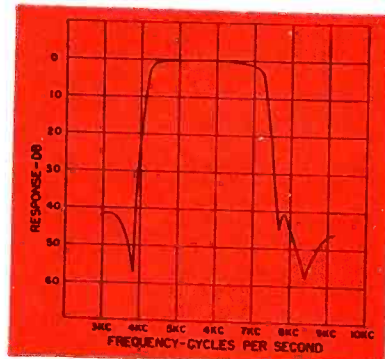
This 600 ohm miniaturized 1 KC band pass filter is housed in a case only 1" x 1 3/4" x 2 1/2".



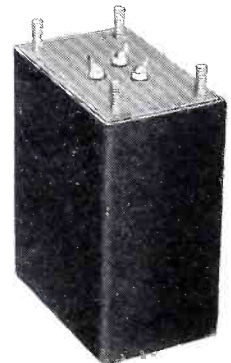
This 600 ohm miniaturized low pass filter is housed in a case only 1" x 1 3/4" x 2 1/2".



This power line filter provides correct output voltages from sources of 50 to 400 cycles... noise attenuation is from 14 KC to 400 MC... 29 cubic inches.



This band pass filter is designed for sharp cut-off at both ends of the range... 10,000 ohms... case dimensions 1 1/8" x 2 1/2" x 3 1/4".



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JUNE MID-MONTH • 1953

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ELECTRONIC COMPONENTS, EQUIPMENT AND ALLIED PRODUCTS FOR ALL COMMUNICATION AND INDUSTRIAL APPLICATIONS

General Electric has been building high-quality electronic components and equipments for many years. The components are available not only for communication equipment but also for industrial electronic equipment such as high-frequency heating, radar, controls, etc. The same is true of the equipment.

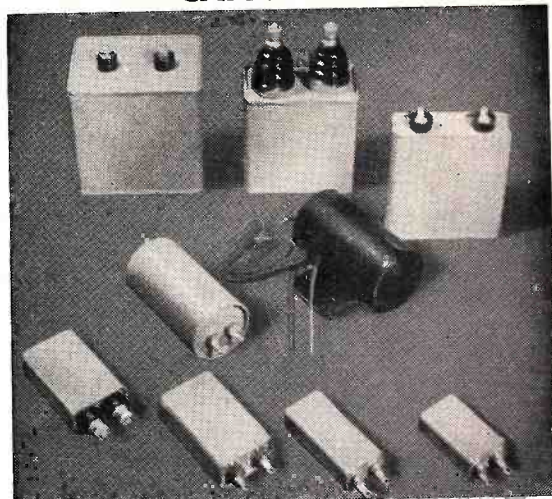
Each component line manufactured by General Electric is backed up by capable design engineers, finest manufacturing facilities, and our renowned development and research laboratories. Components and equipment listed below are but representative. For further information on the complete line, please get in touch with the nearest General Electric Sales Office.

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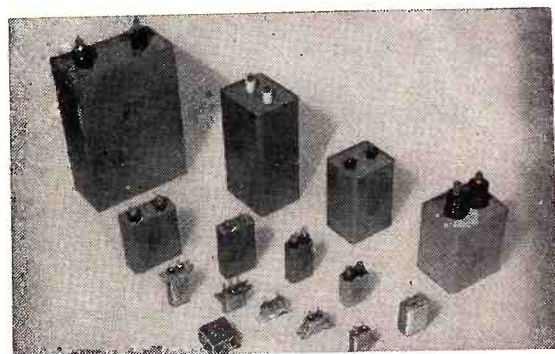
FOR INFORMATION ON G-E APPARATUS PRODUCTS LISTED IN THE DIRECTORY SECTION BUT NOT SHOWN ABOVE, PLEASE TURN TO PAGE 12

CAPACITORS



STANDARD COMMERCIAL TYPES Fixed Paper-dielectric Capacitors

A-c/d-c dual-rated Pyranol* capacitors for motors, controls, electronic equipments, and other applications will reduce inventories, simplify design problems, and increase standardization. Capacitors in the voltage ranges 236 through 660 volts, a-c, and 400 through 1500 volts, d-c, are now dual-rated and can be used for either a-c or d-c applications. Other a-c and d-c ratings available: 0.01 to 75 mu f, 236 to 660 volts, a-c, and 400 to 100,000 volts, d-c. Write for Bulletin GEC-809.



G-E CAPACITORS TO MEET JAN-C-25 SPECS 100 to 12,500 Volts, D-c — 0.01 to 15 Microfarads

These fixed paper-dielectric capacitors are designed to meet the rigid requirements of the joint Army-Navy specifications for use in electronic equipment for the armed forces. Hermetically sealed in metallic containers, these capacitors for d-c applications are available in Characteristics E and F and in case styles CP-53, -54, -61, -63, -67, -69, and -70. In addition to regular applications, these units may also be used at higher temperatures, higher voltages for short-life applications, and with a-c voltages. Write for Bulletin GEC-810.

*Registered trade-mark of General Electric Co.

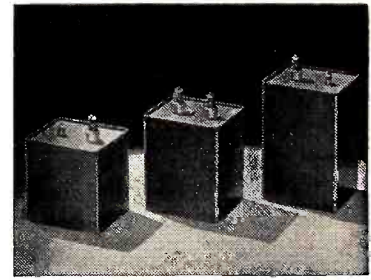
CAPACITORS

G-E DRAWN-OVAL CAPACITORS (DUAL A-C, D-C RATED) 330 A-c/600 D-c to 660 A-c/1500 D-c Volts



1 to 10 Microfarads

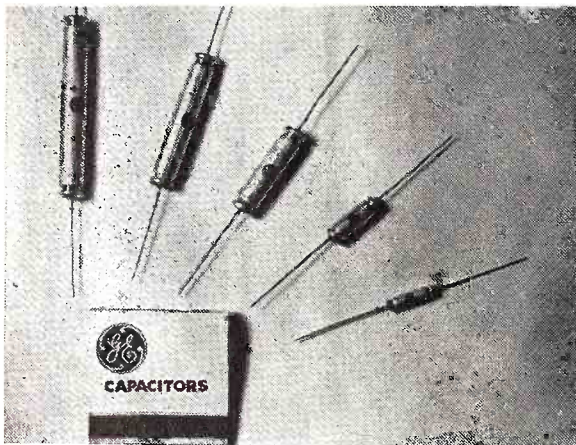
These are dual-rated a-c/d-c capacitors in fluorescent-ballast containers. They are designed to supersede present case types 53 and 70 (shown left with smaller drawn-oval units). Drawn-oval capacitors are smaller, lighter, mechanically stronger, use less critical material, and cost 10 to 20 per cent less than standard fixed paper-dielectric capacitors. Write for Bulletin GEA-5777.



ENERGY STORAGE

These d-c Pyranol capacitors for phototube and similar light-duty energy-storage applications are the result of years of experience in the design and manufacture of capacitors for this type of service. They are relatively lightweight, small, stable capacitors having a life consistent with the application involved. Write for Bulletin GEA-4646.

G-E TANTALYTIC CAPACITORS

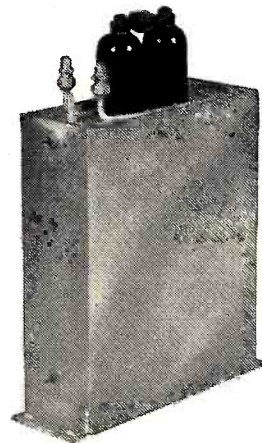


The Tantalum capacitor was developed to fit certain direct-current, low-voltage applications where aluminum electrolytics and paper capacitors have not proven entirely satisfactory, and is suggested for applications where superior performance and small size are the major factors.

The Tantalum capacitor is a foil-type, tantalum-electrode, electrolytic unit, similar in construction to an aluminum electrolytic capacitor, but, because of the characteristics of tantalum foil and the electrolyte employed, is smaller in size. The Tantalum capacitor has lower leakage currents, longer shelf life, and a wider range of temperature operation (-55°C to $+85^{\circ}\text{C}$), without derating, than the conventional aluminum electrolytic capacitor. Tantalum capacitors, in a wide range of ratings, are currently being used in telephone equipment and military communication and ordnance equipment.

Write for Bulletin GEC-808.

HFP CAPACITORS



These high-frequency, liquid-filled, parallel-plate capacitors are specifically designed for use in the resonant circuit of high-frequency electronic oscillators, such as those used in electronic-heater applications. They may be operated at relatively high voltages and will carry heavy currents continuously at frequencies of 50 kilocycles to several megacycles. Write for Bulletin GEA-4365.

SUBMINIATURE METAL-CLAD TUBULARS



PERMAFIL UNITS

Subminiature metal clad tubular capacitors with silicone end seals and a solid dielectric Permafil, for operation from -55°C to $+125^{\circ}\text{C}$ without derating. With small size, no liquid leakage and high insulation resistance, they will withstand extreme temperature cycling. Because of capacitors silicone end seals with all-welded construction, leads can be soldered next to case without damage to seal. Also, this new silicone end seal permits a polarized voltage to be applied under severe humidity conditions.

Meeting all military requirements, capacitors can be supplied in both tab and exposed foil designs.

Ratings range from .001 to 1.0 muf. in voltage ratings of 100, 200, 400 and 600 volts d-c and cases in standard sizes from .235 in diameter and 11/16 in. length to 1 in. diameter and 2 5/8 in. length. (Write for Bulletin GEA-5934.)

*Registered trade-mark of General Electric Co.



PYRANOL* UNITS

Subminiature metal clad tubular capacitors with a new Pyranol liquid dielectric and silicone end seals for operation from -55°C to $+85^{\circ}\text{C}$ without derating.

Meeting all Char. E requirements for use in military electronics equipments, Pyranol metal-clad tubulars are 20% smaller than comparable oil-filled units, the same size as old style wax units but have superior life characteristics. The silicone end seals, of all-welded construction, provide maximum resistance to thermal and physical shock and permit soldering up to the bushing without danger of seal damage. In addition, in severe humidity conditions, the new silicone end seal permits a polarized voltage to be applied to the capacitor.

They can be supplied in standard case sizes in either tab or exposed foil designs in ratings from .001 to 1.0 muf. in voltage of 100, 200, 400 and 600 volts d-c workings. Write for Bulletin GEA-5934.

CAPACITORS

PERMAFIL CAPACITORS

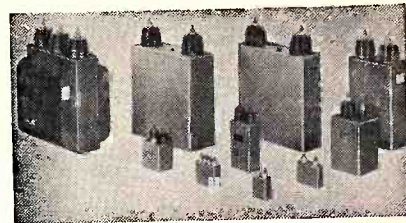


Permafil high-temperature capacitors are designed to meet the performance requirements of JAN-C-25 Characteristic E (mineral oil) capacitors, and in addition, are suitable for operation in ambient temperatures from -55 to +125 C at full rated voltage.

Permafil, used as the impregnant instead of mineral oil, is a solid resinous material having excellent electrical characteristics over a wide temperature range. Since it is a compound, the processing and manufacture of Permafil capacitors can be controlled to exacting specifications and results in units that are reliable at elevated temperatures. Because the impregnant is solid, it eliminates possibilities of leaks. For information, write Specialty Capacitor Sales, Hudson Falls, N. Y.

Ratings	D-c Voltage	Mu f
Case Style 53	400	.05 to 1
Case Style 61	400	.10 to 1
Case Style 61	400	.05-.05 to .50-.50

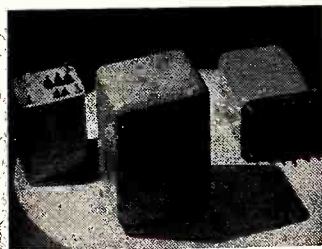
PULSE FORMING NETWORKS



These capacitor pulse-forming networks, Type E, are for applications in radar and industrial equipment where the normal (exponential) capacitor discharge shape is not suitable and where an impulse having a definite energy content and duration is required. Write for Bulletin GEA-4996.

SPECIALTY TRANSFORMERS FOR ELECTRONIC EQUIPMENT

HERMETICALLY SEALED



A complete line of hermetic transformers in 11 standardized case sizes was specifically designed to meet the performance requirements of the government MIL-T-27 specifications. These units, featuring drawn-steel cases and silicone bushings, are the most dependable, leakproof transformers it is possible to provide and can be used on a wide range of applications.

COMPOUND FILLED



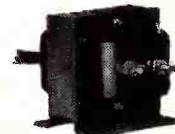
Particularly suitable for applications where moisture or humidity is excessive. For such applications, they are far superior to core-and-coil units. If immersion-proof unit is not required, they are more economical than hermetically sealed transformers. They have wide application in the electronics field, such as in frequency-modulation, carrier-current, and speech-input equipment. An especially useful feature is the universal mounting—the units can be top- or bottom-mounted for open or under-deck wiring.

CORE-AND-COIL



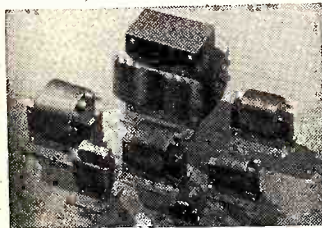
Usually applied where moisture resistance is not an important factor, and where size and weight must be kept to a minimum. Composed of automatically wound coils imposed on finest-grade silicon-steel core laminations, they are of the same uniform high quality as our enclosed transformers. Made to exacting tolerances to provide excellent electrical characteristics. Terminal boards top- or bottom-mounted, or with leads, and with mounting studs or brackets to meet special requirements.

CONTROL AND SIGNAL TRANSFORMERS



Designed in standard sizes from 0.0075 to 0.200 kva to supply low-voltage circuits for most economical operation of numerous industrial, commercial, and household equipments. A complete standard line of normal reactance, high-reactance, and warp-stop transformers is available to meet most applications. However, special units built from standard parts can be designed for special applications. A complete line of transformers is available for specific use with machine tools. Designed so that 23 ratings will meet requirements of most foreign, as well as unusual domestic, applications. All units have front-mounted terminal boards and built-in circuit protectors.

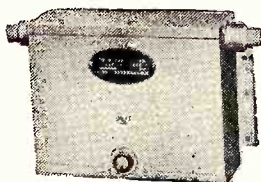
PERMAFIL TYPE



For electronic applications. They utilize a special core-and-coil construction which permits size and weight advantage comparable to and, in many instances, better than conventional core-and-coil unit. Completely protected by a tough coating of Permafil (a synthetic resin developed by G.E.) which makes them highly moisture resistant. Particularly adaptable to aircraft use where size and weight requirements are extremely critical.

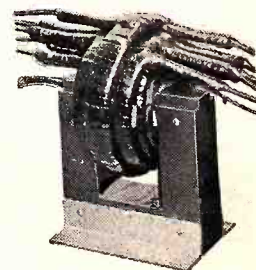
AIRCRAFT TRANSFORMERS

General Electric manufactures a complete line of standard 400-cycle aircraft transformers which includes general-purpose transformers, phase-changing transformers, high-temperature silicone transformers, ballasts for fluorescent lamps, ignition transformers for cabin heaters, de-icers, and jet engines. General Electric builds transformers to individual specifications, both military and commercial.



GOOSENECK FILAMENT TRANSFORMERS

Are used as components of radar and transmitter equipment, and allied devices which require high operating voltages above ground. Construction type shown in the photograph permits a substantial reduction in size and weight—critical factors in many installations. A cost saving is also effected over similar ratings of enclosed-type construction.



VOLTAGE REGULATORS

AUTOMATIC VOLTAGE STABILIZERS:

For equipment that requires stable a-c input or for stable output of 115 and/or 230 volts in sizes from 15 to 5000 va, standard G-E stabilizers can be used to cut costs, save space.

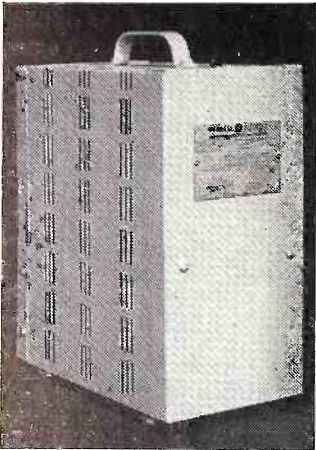
With rated load at unity power factor, they maintain output within $\pm 1\%$ for line variations of 95 to 130 or 190 to 260 volts. Quiet, automatic, they provide quick recovery when subject to simultaneous line and load variations, and voltage surges.



If your product is composed of one of the following items, it will pay you to investigate stabilizers: television and radio equipment; telephone apparatus; sound equipment; lighting circuits; photometers; x-ray equipment; rectifiers (full-wave); electrochemical apparatus; test equipment and precision processes; photographic equipment; electronic circuits; calibration devices; color comparators. Write for Bulletin GEA-5754.

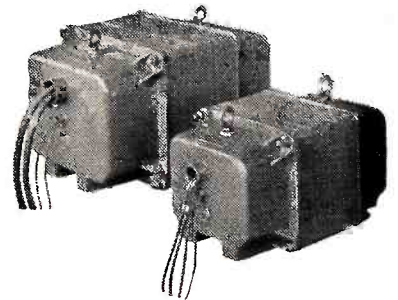
INDUCTROLS (Hand or Automatic)

To meet the increasing demand for smooth voltage regulation in smaller electric apparatus, G.E. has extended its line of induction voltage regulators to include the 300- and 600-volt-ampere ratings. With these new Inductrols, smaller laboratory, industrial, and communications applications are now afforded smooth control, high efficiency, and dependability. They can be automatically or hand operated. Write for Bulletins GEA-5833 and GEC-795.

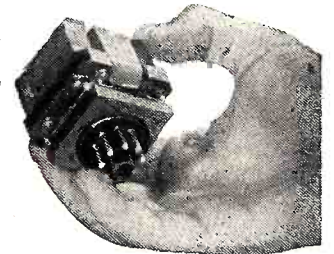


SATURABLE REACTORS

Their features are: 1. provide control in an a-c circuit by means of a direct current. 2. provide a wide range of control with smooth adjustment over entire range. 3. d-c control power required is small, obtainable from any reasonable combination of available current and voltage. 4. very efficient, even at light loads. 5. voltage drop in reactor at full saturation is small, permitting 93% or more of the voltage to be applied to load. 6. compact, sturdy, no moving parts. 7. control power readily obtained from electronic rectifier. 8. conveniently installed in least crowded part of the building for remote control operation. 9. provide a means of insulating the d-c control from the a-c circuit. These units are for use as control devices for numerous automatic and manual control applications. Write for Bulletin GEC-341.



AMPLISTAT Magnetic Amplifier



This amplistat is a complete d-c to d-c magnetic amplifier of the self-saturating type. It is complete with reactors and rectifiers mounted in a metal enclosure on a standard base. The plug feature permits convenience of connection and ease of removal for testing the rest of the circuit. Features include: *High Gain — Isolation* — Input windings galvanically isolated from output. *Reliable* — Rugged construction, little, if any, maintenance. *Static* — No moving parts. *No warm-up time* — Has no tubes. *Compact* — Fits easily on control panels and chassis.

Application: This amplistat is a complete packaged d-c amplifier applicable to a wide range of control and instrumentation purposes. The following are a few of the many possible combinations of SIGNAL SOURCES (Thermocouples, Strain Gages, Thermistors, Photocells, Phototube amplifiers, Bismuth-wire magnetic-field sensitive resistors, Shunts, Resistance-type temperature bulbs, other Amplistats) with CONTROLLED DEVICES (Relays, Solenoids, Small-motor fields, Generators, Amplidyne fields, Power Rectifiers, Lamps, Heating elements, other Amplistats).

SINGLE-PHASE, 60 CYCLES, INDOOR SERVICE									
Va Continuous 55C Rise	Cat. No.	List Price Each	Load Amperes At % Raise and Lower Regulation					† Approx. Ship. Wt. Lb.	
			120 VOLTS		240 VOLTS				
AUTOMATICALLY OPERATED									
120/240 VOLTS — 10/20% AT 120 VOLTS, 5/10% AT 240 VOLTS									
			10%	20%	5%	10%	10%	10%	
							(3 wire)		
300	31D2340	*\$683	25	12.5	25	12.5	12.5	58	
600	31D2342	* 712	50	25	50	25	25	74	
120/240 VOLTS — 15/30% AT 120 VOLTS, 7.5/15% AT 240 VOLTS									
			15%	30%	7.5%	15%	15%		
							(3 wire)		
300	31D2341	*\$683	16.7	8.3	16.7	8.3	8.3	58	
600	31D2343	* 712	33.4	16.7	33.4	16.7	16.7	74	
HAND OPERATED									
120/240 VOLTS — 10/20% AT 120 VOLTS, 5/10% AT 240 VOLTS									
			10%	20%	5%	10%	10%		
							(3 wire)		
300	31D300	\$176	25	12.5	25	12.5	12.5	40	
600	31D302	205	50	25	50	25	25	58	
120/240 VOLTS — 15/30% AT 120 VOLTS, 7.5/15% AT 240 VOLTS									
			15%	30%	7.5%	15%	15%		
							(3 wire)		
300	31D301	\$176	16.7	8.3	16.7	8.3	8.3		
600	31D303	205	33.4	16.7	33.4	16.7	16.7		
120/240 VOLTS — 100/200% AT 120 VOLTS, 50/100% AT 240 VOLTS									
			100%	200%	50%	100%	100%		
				§			(3 wire)		
1200‡	31D304	\$205	10	5	10	5	5	58	

*Prices include control panel. †Weights for automatically operated units do not include control panel, which is mounted separately from the regulator. Control panel weights are: ship. 35 lb, net 30 lb. ‡Rated for intermittent (1-hour) service. §200% raise and 100% lower regulation.

ELECTRONIC AMPLIDYNE:

An extremely responsive amplifier combined with a motor amplidyne set, useful in many types of motor control where precise regulation of current, voltage and speed is necessary or desirable.

APPLICATION — Control speed, limit loads, hold tension, speed up acceleration, position precisely, assure quick stopping. Readily adaptable to programming and processing control.

RATED — As a regulated adjustable-voltage power supply for d-c motors up to 1½ hp. As regulated exciter for large adjustable-voltage drives up to 200 hp. The unit has an output of 1½ kw, 250 volts. Can be arranged for use on 220- or 440-volt, 3-phase, 60-cycle power supply.

The G-E electronic amplidyne is applied as a part of a complete control system. Write for Bulletin GEA-4889A.



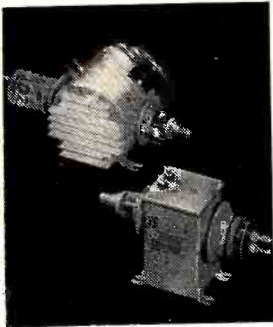
HIGH VOLTAGE COMPONENTS

HIGH PRECISION RECTIFIERS:



These d-c power-supply units are especially built for precision work. Hermetically sealed, they have a number of highly desirable features which make them suitable for supplying the high potential necessary for cathode-ray tubes, television-camera tubes, radar-indicator scopes, electron microscopes, and other jobs where unusually low regulation, lightweight, and small size are primary considerations. Illustrated is a unit rated 7000 volts, 0.1 ma, d-c. It is manufactured for 215 volts, 2000 to 20,000 cycles, a-c input. An additional pair of terminals, supplying 45 volts a-c when 215 volts are applied to the input terminals, makes the unit especially suitable for use in the tank circuit of an audio oscillator.

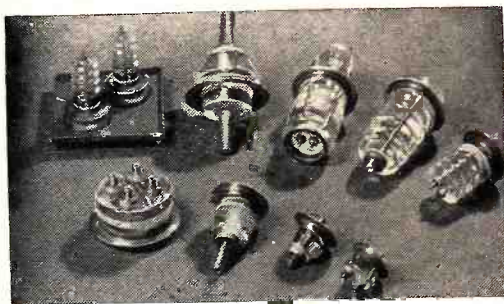
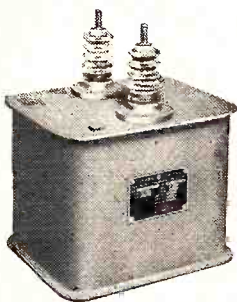
PULSE TRANSFORMERS — Oil-filled, Hermetically Sealed:



Oil-insulated hermetically sealed pulse transformers in peak voltage ratings of from 10 to 100 kv or higher and in peak-power ratings up to 30,000 kva or more are now available for use with either hard-tube or line-type modulators.

These compact units, designed for operation on pulse durations ranging from 0.1 to 20 microseconds—with repetition rates up to 4000 PPS.—will be found ideal for such applications as pulse voltage step-up or -down, impedance matching, phase reversing or non-reversing, isolating load from source.

RESONANT REACTORS — Oil-filled, Hermetically Sealed Precision reactors of the type required by resonant charging, line-type, radar modulator circuits. Designed to operate at full d-c load with an a-c current superimposed. Insulated to withstand test voltages of 2 times normal operating voltage. Currently available in peak-operating-voltage ratings of from 10 to 50 kv, and current ratings up to 3.0 amperes, these sturdy units have a wide range of inductance ratings from .25 to 300 henrys, which remains constant within 5% from full to 50% full-load current.

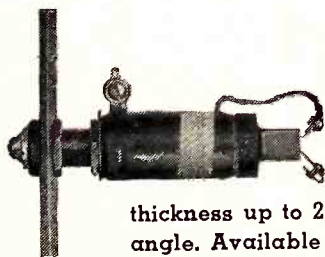


CAST GLASS BUSHINGS

In ratings up to the 15-kv power-transformer impulse level and for currents up to 800 amp, permit the successful design of hermetically sealed electric apparatus. Heat-proof, leakproof, shockproof bushings for use in vital communication and commercial application where severe operating conditions are continually encountered. Available in a wide variety of sizes and shapes in both single- and multi-conductor designs, they

offer the following advantages. 1. Attached directly to apparatus, making gaskets unnecessary and providing a hermetic seal. Designers may utilize all the advantages of present-day insulating materials without fear of reduced dielectric strength caused by the entrance of moisture. 2. Make possible design of more compact, lighter-weight apparatus at lower cost for airborne and other specialized equipment uses. 3. Thermal characteristics of the glass used have been co-ordinated with those of the metal parts which are directly sealed into the bushing to produce strain-free seals which are capable of withstanding thermal shocks far in excess of operating conditions.

INDICATING LAMPS



Type ET-5, offers high visibility, low wattage, and long life. Consists of telephone-type lamp with contacts mounted within an insulated metal tube and with a vitreous-enamel resistor for any voltage up to 660 v. For any panel thickness up to 2 in. Color cap provides excellent vision from any angle. Available in 6 colors. Write for Bulletin GEA-3643.

FILAMENT TRANSFORMERS



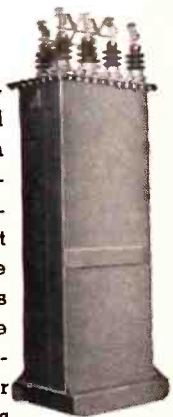
Oil-insulated filament transformers for special applications or for use with any of the standard high-voltage rectifier tubes. These compact units can be provided with or without tube socket mounted integral with the high-voltage terminal. Illustrated is a hermetically sealed, low-capacitance filament transformer rated 5 volts, 11 amperes, and insulated to the 18-kv level.

CASCADE-TYPE RECTIFIERS

In laboratory or factory testing and power-supply applications where smooth high d-c voltages are required, cascade connections of from one to four conventional 35-kv, 32-ma rectifiers can be furnished for single-phase operation from 115–230-v, 50- and 60-cycle power supply. Output-voltage ripple peak to peak not to exceed 0.1% per ma. Control panel furnished which provides smooth output-voltage control over complete range from zero to max. Panel also contains overload relays and meters to indicate output voltage and current and filament voltage.

BROADCAST MODULATION TRANSFORMERS

High-fidelity, low-phase-shift, Pyranol or oil modulation transformers and reactors for high-power AM broadcast transmitters are available either as integral or separate units. Highly developed transformer designs in ratings from 3.5 to 500 kw provide wider transmission frequency range and minimize harmonic voltage insertion. Low phase-shift provides more flexibility and range for amplifier feed-back circuits. Overvoltage spark gaps add to the reliability of these units.



For information on these and other high-voltage components, write Specialty Products Sales, Holyoke, Mass., giving full details of application involved.

SWITCHBOARD COMPONENTS

PANEL INSTRUMENTS: 3 1/2-inch Type: General-purpose, small panel instruments for use in radio and communications equipment where compactness (particularly minimum depth behind the panel) is essential. Internal-pivot design construction with pivots solidly mounted to the inside of the shell moving coil. Element assembly is a self-contained unit supported by a high-coercive cast magnet. A strong, compact instrument with fast response and excellent damping. Available in a variety of ratings, in round and square cases: Type DO-71 voltmeters, ammeters, milliammeters, and microammeters for measuring d-c voltage and current; Type AO-72 voltmeters, ammeters, and milliammeters for measuring a-c voltage and current.

2 1/2-inch Types: Same construction and appearance design as the 3 1/2-inch types. Type DW-71 for d-c measurements: ammeters (1 to 30 amp), milliammeters (1 to 500 ma), microammeters (50 to 500 ua), and voltmeters (1 v to 300 v). Write for Bulletin GEC-366.

DIRECT-CURRENT, TYPE DO-71			ALTERNATING CURRENT, TYPE AO-72		
Type	Rating Range	Approx. Resist. Range Ohms	Type	Rating Range	Approx. Resist. Range Ohms
Ammeter	1 to 50 amp	.001 to .05	Ammeter	1 to 100 amp	.00031 to .138
Milliammeter	1 to 500 ma	.10 to 68	Milliammeter	10 to 500 ma	.43 to 1060
Microammeter	20 to 500 ua	70 to 2030	Voltmeter	1 to 500 v	2 to 100,000
Voltmeter	1 to 500 v	1000 to 500,000			
Kilovoltmeter	1 to 5 kv	1,000,000 to 5,000,000			

OPERATING TIME METER—Type KT: Type KT time meters provide an accurate, inexpensive method of measuring the life of electron tubes, record total operating time of the machines or devices to which they are connected. They are available in three forms; for panel or switchboard mounting, portable, and for conduit mounting. They also can be furnished to match the operating characteristics of various machines, and are available to measure operating time in hours, tenths of hours, or minutes. These time meters are designed for applications on electron-tube life tests, punch presses, molding machines, etc. For use on 60-, 50-, or 25-cycle a-c circuits. Voltage rating is from 11 to 460 volts for the three available forms of this meter. Write for Bulletin GEC-472.

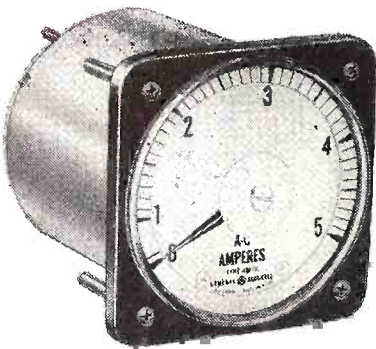


GENERAL PURPOSE, AUTOMATIC TIME SWITCH—Type T-27

One of the most versatile of all G-E time switches, the T-27 can control two circuits for as many as 10 ON-OFF operations per day. Can be furnished with omitting device to skip a day or more, and with astronomic dial for dusk-dawn operation. Powered by the famous Telechron* motor, the T-27 is available for 25-, 50-, or 60-cycle operation and from 115 to 460 volts. Contacts are rated 35 amperes at 230 volts. Dimensions are 10 3/4 by 5 3/8 by 4 7/8 inches. Write for Bulletin GEA-535.



*Registered trade-mark of General Electric Co.



SWITCHBOARD INSTRUMENTS
Types AB-18 (a-c) and DB-18 (a-c)
AMMETERS
VOLTMETERS
WATTMETERS

A-C TYPES	RANGE	OPERATING PRINCIPLE	CYCLES	ACCURACY
VOLTMETER	150-750 v	Attraction-Repulsion	25-125	± 1 per cent
AMMETER	2-20 amp self-contained, otherwise limit is limit of C.T.	Attraction-Repulsion	25-125	± 1 per cent
D-C TYPES				
VOLTMETER	30-170 v	Perm. Magnet, Moving Coil		± 1 per cent
AMMETER	1-3000 amp	Perm. Magnet, Moving Coil		± 1 per cent
MILLIAMMETER	1-500 ma	Perm. Magnet, Moving Coil		± 1 per cent
MICROAMMETER	300-750 mu a	Perm. Magnet, Moving Coil		± 1 per cent

Long-scale, compact instruments intended for general switchboard service on large and small equipments. Excellent for control stations, test equipment, and other installation in limited space. 5 instruments can be mounted side-by-side on a 24-in. panel. Drawn-steel, dustproof covers for semiflush mounting. New convex glass cover, with scale mounted flush with case front, reduces shadows to minimum and results in greater readability. Antiparallax scale and pointer, magnetic damping, and external zero adjusters.

General Electric switchboard instruments include voltmeters, ammeters, wattmeters, frequency meters, power-factor meters, varimeters, synchrosopes, temperature meters, and ground detectors. Pertinent data and listings for the more common devices are presented in this publication, although instruments of other ratings and constructions are also available; for example, thermocouple types for the measurement of h-f current or rectifier types for high-sensitivity a-c measurements. Write for Bulletin GEC-218.

WATTMETERS: 25-125 cycle; Accuracy—±1%; Scale Length and Dimensions same as single instruments; Operating Principle—Electrodynamometer; Single-phase and Polyphase types.

VARMETERS: 3-phase, 3-wire; 2-phase, 3-wire; 2-phase, 4-wire; 3-phase, 4-wire; 5 amp; 120-208 v; 25 cycles to all commercial frequencies; Accuracy—±1%; Operating Principle—Electrodynamometer with autotransformer.

FREQUENCY METERS: 120 v; 60 cycles; Accuracy—22.5-27.5 cy—0.08 cy, 45-55 cy—0.15 cy, 55-65 cy—0.15 cy, 40-65 cy—0.25, 20-90 cy—1.00 cy, 350-450 cy—1.50 cy; Operating Principle—Resonant-circuit.

POWER-FACTOR METERS: 3-wire, 3-phase, 25-125 cycles; 4-wire, 3-phase, 25-125 cycles; 5 amp, 120-600 v; Accuracy—±.01 power factor for rated current, voltage and frequency; Operating Principle—Polarized-vane.

SYNCHROSCOPES: 25 cycles with external impeders; 50 and 60 cycles, self-contained; 120 v; 360° rotation; Operating Principle—Polarized-vane.

PORTABLE & RECORDING INSTRUMENTS



PHOTOELECTRIC RECORDER — Type CE: For special temperature measurements, developmental testing, high-speed recording, laboratory investigations, physiological research, and equipment tests. Provides direct ink records, and is ideal for any test where only a small amount of energy is available for the operation of the recorder. Sensitivities obtained as low as 1.0 mu a, full scale. Response periods as fast as $\frac{1}{5}$ second. 4 different motor arrangements provide chart speeds from $\frac{1}{2}$ inch per hour to 72 inches per minute. Write for Bulletin GEC-254.

INSULATION-RESISTANCE METER: An electronic instrument designed to measure insulation resistance over a range of 0 to 20,000 megohms. Measurements indicate poor insulating materials and materials contaminated by dirt or moisture. This instrument also makes possible the study of the effects of temperature and humidity on insulation. Consists of an electronic rectifier, a bridge circuit which contains Thyrite* resistance material, and an electronic-tube voltmeter, all in one enclosure. Meter is available in range of 5 to 20,000 megohms and has four scales. Over the range of 5 to 20,000 megohms, tests are made at a constant 500-volt d-c potential; and from 0 to 5 megohms at 0 to 250 volts. The meter is small, compact, portable — convenient for production and service testing, simple to operate. Write for Bulletin GEC-753.



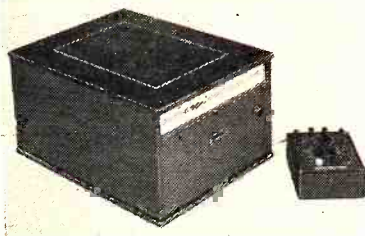
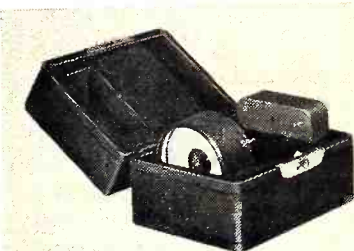
CURRENT LIMITED HIGH-POTENTIAL TESTER: By limiting the output current to a maximum of 5 milliamperes, the tester effectively minimizes most of the hazards encountered with high-potential testing equipment. Features: output current limited to below the maximum current which an operator can let go; non-destructive testing; line surges virtually eliminated in output; measures crest value of voltage on sample regardless of wave shape, internal voltage drop, or variation in line voltage; faults indicated by glow lamp on panel. Range: 0-3500 volts. Output voltage: 0-3500 volts.



RMS. Output current limited to less than 5 milliamperes when shipped. Maximum load for full output voltage: .005 mfd. Write for Bulletin GEC-700.

GAUSS METERS: Indicates flux density and direction of flux in magnet gaps. Used for measuring: Flux density in gaps of instrument magnets; of blocked d-c relays and breakers; of blocked rotor-generators or motors. Field gradient across air gaps. Direction and density of leakage flux emitted from perimeter of magnets. Flux density in iron portions of magnetic circuits. Strength and direction of stray fields of many permanent and electromagnets. Magnetic properties encountered in laboratory work.

INDICATING FLUXMETER: A convenient means for accurately measuring flux densities, total flux, and microcoulombs. Determines magnetic properties of permanent magnets and d-c electromagnets. Measures flux distribution in a magnet gap, leakage flux along sections of a permanent magnet or electromagnet.



THERMOCOUPLE VACUUM GAGE Measures pressures encountered in laboratory studies and in many manufacturing and chemical processes. Range of 1 to 200 microns and from 1 to 500 microns of mercury. Valuable for checking pressures for vacuum-tube evacuation, vacuum dehydration, and vacuum-heat treatment of metals, metalizing, and vacuum processing of vitamins. The thermocouple vacuum gage is sensitive to both condensable and noncondensable gases, and does not require recalibration when tubes are interchanged. Three different mountings are offered: portable-case style, relay-rack type, and panel type.

PORTABLE INDICATING INSTRUMENTS

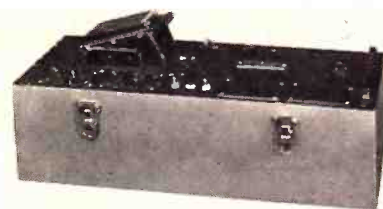


DP-12

A new line of instruments, having a functional design to give the greatest convenience and using precision stabilized shunts and resistors to achieve sustained accuracy. These high-accuracy instruments are suitable for laboratory use as well as for field applications and production tests where high precision is essential.

Type DP-11: Designed for general testing where a dependable, easily read instrument with $\frac{1}{2}$ of 1% accuracy is required. Ideal for trouble shooting and maintenance work where accurate readings must be taken under adverse lighting conditions. Size — $7\frac{3}{8}'' \times 7\frac{7}{8}'' \times 3\frac{1}{4}''$. Scale length — 5.5 inches. Pointer — Knife edge with mirror scale. Damping — Magnetic. Zero Adjuster — External. Shielding — excellent shielding from stray magnetic fields.

Type DP-12: Specifications are similar to DP-11 above, except accuracy is to $\frac{1}{4}$ of 1% full scale.

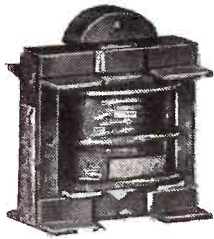


OSCILLOGRAPH — Type PM-18: Records 2, 3, or 4 rapidly or slowly changing currents and voltages simultaneously. Records steady-state phenomena, such as wave shape of alternating currents and voltages, and also transient phenomena of short duration when the quantity to be recorded can be initiated by the closing or opening of a synchronizing switch provided within the oscillograph.

The PM-18 is regularly furnished with a film-pack holder which produces 12 separate oscillograms, $2\frac{1}{4}''$ wide by $3\frac{1}{4}''$ long to record spot speeds up to 12,000 inches per second.

Three film holders available to meet almost every recording requirement. A Polaroid-Land film holder that uses the revolutionary Polaroid-Land film is also available. Makes finished photographic records in about one minute and eliminates need of a darkroom. For those applications which require a longer record, a continuous drive paper holder is available. Write for Bulletin GEC-580A.

CONTROL ACCESSORIES



A-c or D-c SOLENOIDS, CR9503

Simplify complex installations: in direct or remote control requiring short powerful thrusts. Wide selection: 32 different sizes of solenoids of uniform construction are available for push- or pull-type operation and for use on a-c or d-c circuits up to and including 550 volts. To push or pull in a straight line, or to provide mechanical motion at a remote or inaccessible location. They may be operated remotely from a push-button station or automatically by limit switches, pressure switches, float switches, or other pilot circuit devices. Cut-out switches are available for use on d-c circuits. Write for Bulletin GEA-5163.

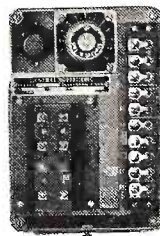


SOLENOID OPERATED VALVES, CR9507: Sizes 1/4- and 3/8-inch pipe tap-sizes are standard pressure ranges to 150 lb per sq in.; maximum temperature 135 C. 3/32-in. orifice is standard; 1/8-inch orifice can be furnished. This small self-contained solenoid valve is ideally suited for automatic control of water, light oils, steam, and refrigerants.

It is simple in design, having only two moving parts and no stuffing box, thus assuring long life and low maintenance. To permit regulation of flow through the valve, a conveniently located metering pin is provided. The metering pin may be omitted if desired. This valve is supplied with cadmium-plated finish.

SOLENOID VALVE—CR9508-A100B: The CR9508-A100B solenoid valve is a small, inexpensive fluid-control device, particularly adapted to the requirements of the heating and air-conditioning industry as well as to general applications for the control of air, oil, water, and gas. Because it is designed to be incorporated into an assembly that has its own enclosure, no coil cover, conduit plate, or similar accessories have been provided.

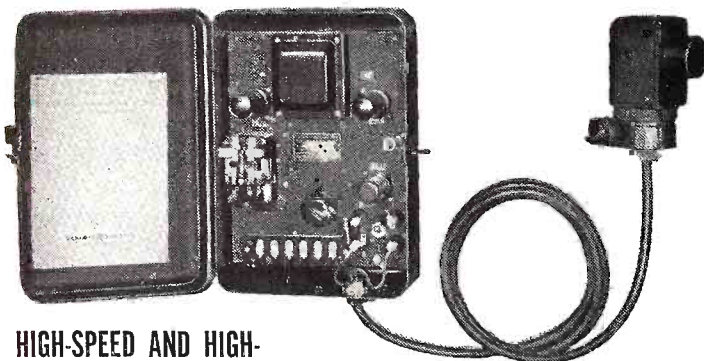
Type of Solenoid	Pounds Pull or Push		Wt of Plunger in Lb	Max. Stroke in in.
	At 85 Per Cent Voltage	At 100 Per Cent Voltage		
Pull	0.65	0.9	0.12	3/4
Pull	0.9	1.3	0.15	1
Pull	3.2	4.5	0.31	1
Push	3.2	4.5	0.5	1
Pull	4.0	6.0	0.5	1 1/4
Push	4.0	6.0	0.8	1 1/4
Pull	10.2	14	0.9	1 1/4
Push	10.2	14	1.2	1 1/4
Pull	22.7	30	2.5	1 3/4
Push	22.7	30	3.3	1 3/4
Pull	21.7	30.2	3.3	2
Push	21.7	30.2	4.0	2
Pull	42	57	5	2
Push	42	57	7.0	2
Pull	51	73	10	3
Push	51	73	16	3
Pull	70	97	13	3
Push	70	97	19	3



ELECTRONIC TIMER, CR7504A 142: For 60- and 50-cycle, 115- or 230-volt, a-c circuits. Three standard models, with selection from 0.06 to 120 seconds in ranges of 20:1. Relay may be connected to be normally energized or normally de-energized during the stand-by period; it is always de-energized during the timed period and energized after timing out. Extremely useful for timing operations of short duration or to provide automatic control for various stages of industrial processes. Repetitive accuracy: ±2% on all settings above 0.5 second.

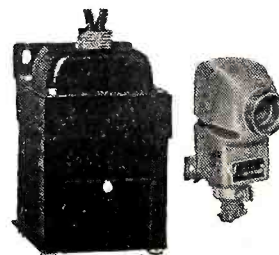
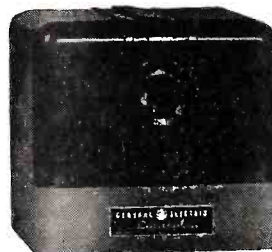
The unit includes one standard vacuum tube and a magnetic relay with double-pole, double-throw contacts rated 10 amperes a-c at 115 volts. Time setting is adjustable by a potentiometer with dial which reads directly in seconds. Potentiometer and dial-plate assembly may be removed easily for remote mountings, if desired. Write for Bulletin GEA-5255.

SELSYNS, CR9890: Indicating or control selsyns are a reliable, accurate, and rapid means of communication. They are being used successfully in such applications as indicating the positions of valves, governors, bridges, turntables, dampers, etc. Selsyns have been very successful in servo systems where the selsyns operate to guide the action of the power units. Two types of selsyns are available—the high-accuracy type which has an accuracy of ± 1 degree and the general-purpose type which has an accuracy as close as ± 5 degrees. Selection can be made from a variety of sizes suited for each application. A complete line of indicators and transmitters including selsyns is available. Write for Bulletin GEA-2176.



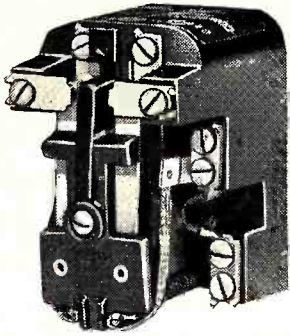
HIGH-SPEED AND HIGH-

SENSITIVITY PHOTOELECTRIC RELAYS: Designed for high-speed operation, with adjustable sensitivity to meet various conditions of phototube illumination. Adjusts to close or open circuit upon suitable light change. Relay operates from an a-c power supply. A rectifier and filter circuit supply d-c voltages to the phototube and amplifier tubes, making the response time independent of the frequency of the power supply. Operates between 1 and 10 foot-candles; a light change of 1/2 ft-c will pick up or drop out the relay. The photoelectric amplifier can be adjusted to respond to a signal as short as 0.001 second where the signal may be a light flash or a light interruption, but the light intensity should be well over 1/2 ft-c and the light interruption should be complete, producing total darkness at the phototube. Write for Bulletin GEC-279.



GENERAL PURPOSE PHOTOELECTRIC RELAY

This general-purpose, photoelectric relay kit, CR7505-K100G3, including a double-pole, double-throw magnetic relay, operates from the interruption of a beam of light, making it simple for items on a production line to be counted easily and quickly. The relay also makes possible automatic weighing with a beam scale and automatic signaling for elevators or doors to save valuable time. Relay operates without a lens in front of the phototube, on a minimum of 40 foot-candles at the aperture, and will reset when light intensity is reduced to 30 foot-candles or less. Write for Bulletin GEA-3533D.



GENERAL-PURPOSE RELAYS, CR2790E: This relay is used to control pilot circuits in response to remote control switch or thermostat, or for direct control of small motors driving pumps, fans, etc. It is also used as a fractional-horsepower motor starter, or in conjunction with a magnetic switch controlling larger motors, heating or lighting circuits and signal systems. This sturdy, general purpose relay comes in open or enclosed forms, in general purpose case. Explosion-proof and watertight case available as kits. Open relays may be front-connected; for conversion to back connected on a metal or insulated base, or with plug-in jacks a kit is available. 3 contact arrangements available; double-pole, double-throw; double-pole, single-throw; single-pole, single-throw. Protection against hazard from restarts after power failures can be provided with the double-pole form when one pole is used as a holding interlock in the coil circuit together with a momentary-contact push-button station. Can be mounted on insulated or non-insulated bases. Enclosed forms have convenient conduit entrances at top and bottom. Write for Bulletin GEC-257.

PUSH-BUTTON STATIONS

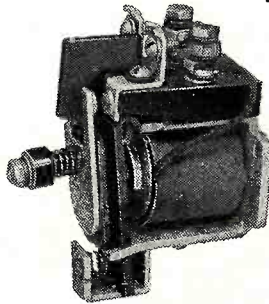
For control circuits of magnetic controllers designed for push-button control. Standard- and heavy-duty stations available which may consist of various combinations of momentary-contact buttons, maintaining-contact buttons, selector switches, and indicating lights, for surface or flush mounting. Standard-duty station recommended for use with contactors rated up to and including 150 amp. Write for Bulletins GEA-3469 (Standard Duty) and GEA-5043 (Heavy Duty).



OILTIGHT PUSH-BUTTON UNITS A new push-button unit with building-block construction. It provides flexibility to meet requirements for special units by simple combination of the basic elements, which consist of separable operators, a removable color ring for identification, and a basic contact block. Operators and contact blocks are furnished separately. Single, double, or tandem contact blocks are quickly and easily attached to any type of operator. Write for Bulletin GEA-5779.

RELAYS

CURRENT-SENSITIVE RELAYS, CR2791C: For electronic applications where switching functions must be performed by small amounts of power, a line of current-sensitive, d-c relays is available. Withstand shock and vibration and operate in ambient temperature from -70F to 200F. Cover range from 40 mw to 50 mw; 1.6 ma to 1500 ma; 0.059 ohms to 14,000 ohms coil resistance; and weigh from 0.22 lb. Contact rating 24 v d-c or 115 a-c of 2.0 amp noninductive and 0.5 amp inductive. Installation easy with plug-in base or solder-type terminals. Write for Bulletin GEC-834.



15-AMP. CONTACTOR, CR2810-1265: For small motors; this normally open, single-pole, single-throw contactor is small, self-contained, and inexpensive. The coil is of the layer-wound type, requires only a few watts of power, and is connected directly across the line. The connections are easily made; all terminals are in the top molded part. A form is available which includes a non-insulated interlock, permitting the use of a momentary-contact push button for operating the contactor; the combination provides under-voltage protection.

Hp Ratings
Single Phase

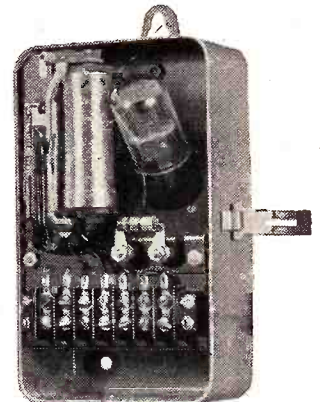
Type	110 v	220 v
Open	1/2	1/2
Enclosed	1/2	1

ELECTRONIC RELAY, CR7511-A111G2

This relay is a simple vacuum-tube amplifier which is sensitive to changes in the resistance of an external circuit. When this resistance falls below a preset value the magnetic relay becomes energized (or deenergized, depending upon the connection) and provides a reliable contact. This relay is used extensively in conjunction with contact-making instruments which are themselves capable of carrying only very small currents. The unit is furnished in a small, weather-resistant enclosing case.

Liquid level probes, CR7511-M100G2, are available for use with this relay in indicating or controlling water level in tanks.

For further information write for Bulletin GEA-4214.



HERMETICALLY SEALED RELAY CR2791G

2, 3 and 4-pole, double throw, 6 pole normally open 28V., D-C, 3 AMPS:

The G-E hermetically sealed relay operates in its own atmosphere, completely independent of conditions outside of its rugged electro-tin plated, drawn-steel housing. During manufacture, the interior has been exhausted, vacuum baked to remove all moisture, filled with dry nitrogen to a pressure of one atmosphere and sealed. Thus, it always operates in the same clean, dry atmosphere, and at a constant pressure. Result, reliability of operation and extended device life. Operating mechanism is sealed and completely tamperproof. Used in the electrical systems and electronic equipment of military and civilian aircraft, in shipboard and portable land-based electronic equipment.

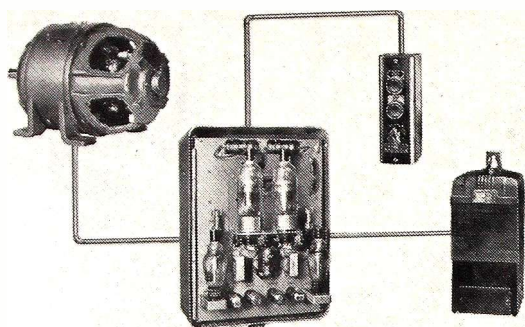


Ambient temp . . . -55°C to 125°C; Vibration . . . Withstands vibration in excess of 5 to 55 cps with max. excursion of 0.060 in.; Shock . . . Operating over -50 g; mechanical damage over 100 g; Terminals . . . Metal-glass (solder hook or plug-in pins). Designed to meet or better all provisions of MIL-R-6106 (Joint Military Service Specifications for Relays) and AN3304, and performance requirements of MIL-R-5757B. Glass reinforced Polyester compound for stack insulation lends greater dielectric strength and arc resistance plus superior impact strength—added life for the relay. Relay will withstand instantaneous voltage surges up to 1500 volts without failure.

Load Type	Normally Open Contacts	Normally Closed Contacts
Resistive (28 v d.c.)	3 amperes	3 amperes
Resistive (115 v, 400 cycle A.C.)	3 amperes	3 amperes
Inductive Motor	1.5 amperes	1.5 amperes
	1.5 amperes	1.5 amperes

THY-MO-TROL* DRIVE

Electronically Operated, Adjustable-speed Drive; Full-range, Stepless Speed Control Standard Ratings from Fractional- to 30-hp Larger Sizes Available



A complete equipment consisting of an anode transformer as required, control and rectifier panel, a control station, and a suitable d-c motor. It operates from an a-c power line. Starting, stopping, reversing, and adjustment of speed are all controlled from the single compact control station. Acceleration is automatic, and motor is protected against overload.

*Registered trade-mark of General Electric Co.

Operating Features

- 1. FULL RANGE**—A single dial—small as a radio volume control, mounted in the push-button control station—gives complete adjustment of motor speed, from low to maximum, without steps. Gives exact speed wanted.
- 2. HOLDS SPEED**—Regardless of ordinary load fluctuations, Thy-mo-trol electronic circuits hold speed constant within extremely narrow limits. Provides both full speed-range and flat speed-load characteristics.
- 3. CURRENT-LIMIT ACCELERATION**—Regardless of the speed-control setting when the START button is pushed, full-wave Thy-mo-trol acceleration is smooth because of electronic current limiting. Starting is extremely fast because of sustained maximum torque during acceleration. No sudden application of excessive torque; therefore, no shock to the machine. No current peaks on the line.

4. FULL TORQUE—Although motor may be scarcely turning over, it can deliver full torque right up to the current-limit point. This means maximum machine output.

5. OTHER THY-MO-TROL ADVANTAGES—Speed can be preset before starting; saves space; no stop for speed change; easy to control automatically; operates direct from a-c line, no d-c supply needed.

Applications

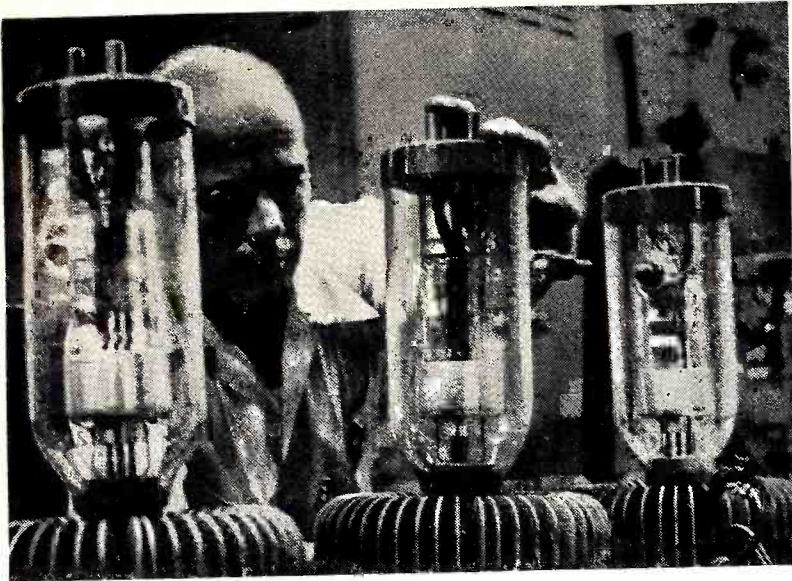
Drill presses, to increase speed range and variety of work handled. Grinders, for precise speed selection and improved finish. Milling machines, to increase work range handled, and to simplify design. Propeller testing, for accurate, smooth speed control. Cable reelers, to maintain constant tension. Conveyors, to match speeds, and many other applications.

FOR INFORMATION ON G-E APPARATUS PRODUCTS NOT SHOWN IN THESE PAGES

Space does not permit description of all G-E products related to the electronic field. Listed below are those not shown in preceding pages. For full details and bulletins write G-E at Schenectady, New York

Amplifiers	Positioning GEA-2176	Illumination GEA-4926	Pyrometers and Potentiometer
Photocell Write for details	Pressure Hdbk. 2230	Liquid Level GEA-3833	Pyrometers GEA-5534, GEC-713
Servo Write for details	Printing GEA-4683	Material Thickness GEC-485	Recorders
Strain Gage Write for details	Refrigeration	Nuclear Radiation GEA-5735	Material Thickness Write for details
Analyzers	Defrosting Write for details	Photographic Exposure GEC-4926	Potentiometer GEC-367
Noise GEC-665	Register GEA-4371, GEA-5079	Positioning GEA-2176	Temperature GEA-5534
Surface Analyzers and	Register Cutter GEA-4371	Power Level Write for details	Regulators
Comparators GEC-311	Smoke & Combustion GEA-5254	Pressure Hdbk. 2230	Current Hdbk. 2415
Vibration GEA-4140	Temperature GEC-1095	Shorted Turn GEA-4539	Frequency GEA-2150
Wave Write for details	Vacuum Hdbk. 2232	Smoke & Combustion GEA-5254	Rheostats Hdbk. 2176, 2180;
Arresters, Lightning	Ventilating Control	Sound Level GEC-665	GAE-59
GEA-2975, 2977	System Hdbk. 2750	Strain GEA-3673	Shunts, Meter Hdbk. 8029
Battery Chargers Hdbk. 9172	Converters	Telemetering GEA-5233	Spectrometers, Mass
Bearings, Jewel GEC-370	High Frequency GEC-319	Temperature GEC-565	Spectrometers and
Bearings, Miniature GEC-370	Low Frequency GEA-4903,	Timing GEA-5108	Spectrographs
Blowers, Small Write for details	Rotary GEA-5551	Torque GEA-4441	Spectrophotometers GEC-307
Breakers, Circuit	Detectors	Vacuum GEA-4313	Speedometers, Electric
GEA-3642, GEA-4951	Alpha GEA-693	Inverters Hdbk. 1545	Write for details
Bridges, Capacitance GEA-4610	Beta GEC-706	Irons, Electric Soldering GEC-1005	Switches
Brushes, Carbon and	Flaw and Defect GEC-706	Jewels, Glass GEC-370	Float Type Hdbk. 2237
Graphite Hdbk. 3896	Leak GEC-2333	Magnetic Analysis	Knife Hdbk. 7123, 7125
Cameras, Cathode Ray	Vibration GEA-4140	Equipment GEC-342	Lever Hdbk. 2260
Oscillograph GEC-593	F.H.P. Dynamometers	Magnetometers GEA-4648	Pressure Operated Hdbk. 2232
Capacitors	Electrodynamometers	Meters	Snap Action GEA-4643
High Frequency	Fatigue Testing Machine,	d'Arsonval GEC-368	Toggle and Pushbutton GEA-1522
Parallel Plate GEA-4365	Vibration GEC-309	Decibel GEC-665	Vacuum Hdbk. 2232
Fixed Paper GEA-4388	Fluxmeter GEC-342	Distortion and Noise GEC-665	Synchros GEC-218
Steatite Tube Write for details	Freq. Constant Controls GEC-910	Field Intensity GEC-238	Tachometers, Electronic GEC-224
Single Bushing, Case Style	Furnaces	Field Strength GEC-238	Telemetering Systems,
Write for details	High Frequency GEC-1005	Footcandle GEA-4926	Electronic GEA-5233
Chokes	Gages	Light GEA-4926	Terminal Strips GEC-400
Audio	Comparator GEC-466	Phase Angle GEC-308	Testers
Filter GEC-481	Ionization Hdbk. 3362	RF Power GEC-403	Coating Thickness GEC-319
Power GEC-481	Paint Depth GEC-319	Sound Level GEC-665	Coil GEA-4539
Communication Systems	Pressure Hdbk. 3362	Vibration GEC-285	Insulation GEC-612
3. Carrier Current GEA-4691	Strain GEA-3673	Viscosity GEC-339	Meter GEC-373
Comparators	Vacuum GEC-4313	Motors	Thermocouples, Pyrometric GEC-714
Automatic Resistance GEC-466	Galvanometers GEC-694	Fractional hp GEC-188	Thermometers, Resistance GEC-565
Controls	Generators	Servo GEA-2176	Timers
Chemical Hdbk. 2760, 2765	Gas-engine-driven	Synchronous GEA-4248,	Automatic Cycle GEC-452
Counting and Sorting Hdbk. 2310	GEA-5299, GEC-499	GEA-5426, GEC-344	Automatic Interval GEA-5108
Door GEA-5034	High Frequency Hdbk. 6118	Oscillators, Ultrasonic GEC-544	Automatic Reset GEC-452
Elevator Leveling GEA-5043	Induction and	Oscillographs	Motor Operated GEC-525
Frequency GEC-491	Dielectric Heating Hdbk. 2608	Multi-element	Sequence GEA-3318
Heat Treating GEC-3301	Motor GEC-302	Recording	Tubes, Vacuum
Humidity Hdbk. 3312	Pulse GEC-792	Ovens, Electric Hdbk. 3625	Thermocouple GEC-385
Illumination Hdbk. 2361	Heating	Photoflash Equipment,	Ultrasonic Generators GEC-544
Inspection GEC-279	Electronic—Accessories &	Electronic GEC-337	Vacuum Indicating
Liquid Level GEC-411	Associated Equipment	Photometers GEC-412	Recording and Control
Loop Regulation Write for details	GEA-4348, GEA-4989	Pilots, Automatic Write for details	Equipment GEC-385
Machine Safety Write for details	Electronic Induction GEA-4945	Pots, Soldering GEC-1005	Varistors (Thyrite) GEA-4138C
Material Thickness GEC-485	Indicators	Pots and Tanks, Heating GEC-1005	Vibration Analysis
Mechanical Switch Hdbk. 2261	Antenna Position GEA-2176	Power Supplies	Equipment GEC-285, GEA-4140
Motors Write for details	Broadcast Volume Hdbk. 8041	High Voltage GEC-751, GEC-752	Equipment, Electronic
Package Wrapping GEA-4371	Dew Point GEC-588	Regulated Hdbk. 3357RL	Balancing GEC-320
Photographic Exposure GEC-287	Film Thickness GEC-319		

THERE'S A G-E ELECTRONIC TUBE FOR EVERY PURPOSE



G-E Electronic Tubes are accurately designed and produced to meet the stringent requirements of electronic circuits—whether for commercial, industrial or military applications. Rigid quality control techniques applied throughout the manufacturing process assure lasting tube performance within established ratings. New applications in communications and industrial equipment constantly demand new tube types. G-E designs tubes to meet every need.

Typical G-E Industrial, Transmitting and Cathode-Ray Tubes, With Special Section on Reliable Receiving Tubes.

Full information, detailed data on these or other G-E tubes sent on request.
Write: Tube Department, General Electric Company, Schenectady 5, New York.

GL-2C39-A
GL-2C40
GL-2C42
GL-2C43
GL-2C46

GL-2E24
GL-2E26
GL-2E30
GL-3X2500A3
GL-4-1000A

GL-4C21
GL-4D21/
4-125A
GL-4X150A
GL-4-250A/
5D22

GL-5C24
GL-7C29
GL-7D21
GL-8D21

GL-9C24
12AY7
GL-35T
GL-100TH
GL-146

GL-152
GL-159
GL-169
GL-203-A
GL-207

GL-211
GL-242-C
FP-265
FP-285
GL-473

GL-592
GL-800
GL-801-A
GL-802
GL-803

GL-805
GL-806
GL-807
GL-809
GL-810

GL-811-A
GL-812-A
GL-813
GL-814
GL-815

GL-826
GL-828
GL-829-B
GL-830-B
GL-832-A

GL-833-A
GL-835
GL-837
GL-838
GL-842

GL-843
GL-845
GL-849
GL-851
GL-862-A

GL-880
GL-889-A
GL-889R-A
GL-891
GL-891-R

GL-892
GL-892-R
GL-893-A
GL-893A-R
GL-895

GL-895-R
GL-898-A
GL-954
GL-955
GL-956

GL-957
GL-1000-T
GL-1603
GL-1612
GL-1613

GL-1614
GL-1619
GL-1620
GL-1621
GL-1622

GL-1623
GL-1624
GL-1625
GL-1629
GL-1633

GL-5513
GL-5516
GL-5518
GL-5549
GL-5556/PJ-8

GL-5588
GL-5610
GL-5654*
GL-5670*
GL-5674

GL-5680
GL-5681
GL-5686*
GL-5687
GL-5691

GL-5692
GL-5693
GL-5710
GL-5718*
GL-5719*

GL-5725*
GL-5739/FP-62
GL-5740/FP-54
GL-5742/PJ-7
GL-5743/PJ-21

GL-5749*
GL-5750*
GL-5751*
GL-5763
GL-5797*

GL-5798*
GL-5814-A*
GL-5824
GL-5840*
GL-5844

GL-5879
GL-5899*
GL-5902*
GL-5963
GL-5965

GL-6005*
GL-6017
GL-6019
GL-6039
GL-6046

GL-6072*
GL-6111*
GL-6112*
GL-6134*
GL-6135*

GL-6136*
GL-6137*
GL-6146
GL-6159
GL-6166

GL-6182
GL-6183
GL-6201*
GL-6283
GL-8000

GL-8002
GL-8002-R
GL-8005
GL-8025-A
GL-9001
GL-9002
GL-9003

PLIOTRONS

THYRATRONS

GL-C1J
GL-2D21
GL-3C23
GL-3C45
GL-5C21/C6J

FG-27-A
FG-81-A
FG-97
FG-98-A
FG-105

FG-154
FG-172
GL-393-A
GL-414
GL-502-A

GL-627
GL-672-A
GL-678
GL-884

GL-885
GL-2050
GL-5544
GL-5545
GL-5557/FG-17

GL-5559/FG-57
GL-5560/FG-95
GL-5632
GL-5662
GL-5663

GL-5720/FG-33
GL-5727*
GL-5728/FG-67
GL-5830/FG-41
GL-5855

GL-5948
GL-6011
GL-6044
GL-6130

*Five-Star type

VACUUM CAPACITORS

GL-1L21
GL-1L22
GL-1L23
GL-1L24
GL-1L25

GL-1L31
GL-1L32
GL-1L33
GL-1L36
GL-1L38

*Five-Star type

• CATHODE-RAY TUBES •

PICTURE TUBES

5TP4	16KP4/16RP4	20DP4-A
7JP4	16KP4-A	20HP4-A/20LP4
8AP4-A	17BP4-A	21EP4-A
10BP4-A	17BP4-B	21EP4-B
10FP4-A	17FP4-A	21FP4-A
12KP4-A	17RP4/17HP4	21JP4
12LP4-A	17VP4/17LP4	21YP4
12UP4-B	17QP4	21ZP4-A
14CP4	19AP4-A	24AP4
16AP4-A	19AP4-B	24TP4
16GP4	20CP4	27EP4
16GP4-B	20CP4-A	

INDUSTRIAL & MILITARY TUBES

GL-2AP1-A	GL-5UP1
GL-2BP1	5QP4
GL-3AP1-A	GL-7BP7-A
GL-3BP1-A	GL-7UP7
GL-3KP1	GL-914-A
GL-3MP1	GL-10KP7
GL-3UP1	GL-12SP7
GL-5BP1-A	GL-12SP7B
GL-5CP1-A	GL-17ADP7
GL-5CP7-A	
GL-5FP7-A	
GL-5FP14	

KENOTRONS • PHOTOTUBES • PHANOTRONS

KC-1
KC-3
GL-2B22
GL-2B23
2X2-A
GL-217-C
GL-218
GL-3B24-W
FP-400
GL-411
5R4-GY
GL-836
GL-1616
GL-5625/KC-4
GL-5726*
GL-5741/FP-85-A
GL-5896*
GL-5973
GL-6087*
GL-6215
GL-6202*
GL-6203*
GL-8013-A
GL-8020
GL-9004
GL-9005

*Five-Star Type

GL-1P21#
GL-1P29/FJ-401
GL-1P37
GL-1P39
GL-1P40
PJ-22
GL-441
GL-868/PJ-23
GL-917
GL-918
GL-919
GL-920
GL-921
GL-922
GL-923
GL-927
GL-929
GL-930
GL-931-A#
GL-935
GL-5581

#Multiplier

FG-166
GL-266-B
FG-280
GL-575-A
GL-673
GL-816
GL-857-B
GL-866-A
GL-869-B
GL-870-A
GL-872-A
GL-5558/FG-32
GL-5561/FG-104
GL-8008

GLOW TUBES • BALLAST TUBES • KON-NEC-TORS

GL-OA2
GL-OA3
GL-OB2
GL-OB3
GL-OC3
GL-OD3
GL-874
GL-5651

GL-5620/FB-50
GL-5621/B-6
GL-5622/B-25
GL-5623/B-47
GL-5624/B-46

1-1KR1	4-19KR1
1-1KR6	4-21KR1
1-15KR0	4-24KR1
2-25KR1	4-40KR1
2-33KR1	7-19KR1
2-36KR1	7-21KR1
2-52KR1	7-24KR1

Note: Mounting clips are available for the above Kon-Nec-Tors.

VACUUM SWITCHES • PHASITRONS • VACUUM GAGES

GL-5626/FA-15
GL-5627/FA-6

GL-2H21
GL-5593

GL-5628/FA-13
GL-5629/FA-14

• MICROWAVE RADAR DEVICES •

TR
GL-1B24-A
GL-1B63-A
GL-6035

Pre-TR
GL-1B38
REFERENCE CAVITY
GL-1Q26-A

A-TR
GL-1B35-A
GL-1B37-A
GL-1B44
GL-1B56

IGNITRONS

GL-5550/GL-415
GL-5551/FG-271
GL-5552/FG-235-A
GL-5553/FG-258-A

GL-5564/GL-507
GL-5822
GL-5779
GL-5554/FG-259-B

GL-5555/FG-238-B
GL-5630
GL-6228/G-506
GL-6228/GL-506

• KLYSTRONS •

GL-6237
GL-6238
GL-6239

GL-6240
GL-6241
GL-6242



GL-6182 PLIOTRON



GL-6283 PLIOTRON



21JP4 INTERNAL-MAGNETIC-FOCUS



KLYSTRON



GL-5545 THYATRON



GL-872-A PHANOTRON



GL-5749 FIVE-STAR TYPE



GL-8020 KENOTRON



GL-5822 IGNITRON



GL-5551/FG-271 IGNITRON



GENERAL ELECTRIC ELECTRONIC TUBE MANUALS...

... provide handy reference for complete data—electrical, mechanical, performance characteristics — on every G-E Tube. The easy-to-read graphs and tube outlines help solve your application problems. Order your set of manuals today! Full information, prices for manuals sent on request. Write: Tube Department, General Electric Company, Schenectady 5, New York.

● GENERAL ELECTRIC RECEIVING TUBES ●

General Electric offers a complete line of dependable receiving tubes of all types — miniature, subminiature, glass and metal — for all applications. Further information on G-E receiving tubes is available from your nearest G-E regional sales office listed below.

INSTALL HIGH-RELIABILITY TUBES, FOR BETTER PRODUCT ACCEPTANCE!*

*For example, the United States Navy has recognized the value of high-reliability tubes by authorizing a detailed list of these types to replace standard-tube counterparts. "Tele-Tech", March, 1953.

**Now available in quantity!**

General Electric high-reliability tubes, carrying the famous 5-Star name, now are available in quantity. To get all the advantages that high-reliability types offer you — greatly increased equipment dependability, lower maintenance cost, longer tube life — specify G-E 5-Star Tubes!

A pioneer in designing and developing these premium types, General Electric gives you tube quality that only experience makes possible. As the largest builder of high-reliability tubes, with outstanding manufacturing facilities, G.E. offers you the widest choice of types, plus high-rate production to meet your needs.

Acceptance of the equipment you design and build will increase, once you change over to 5-Star high-reliability tubes. Field performance will be far more dependable, enhancing your reputation. Write now for Booklet ETD-548, which contains full 5-Star Tube application information! General Electric Company, Tube Department, Schenectady 5, N. Y.

Meet your circuit needs from these 30 premium-performance tubes!

PROTOTYPES	HIGH-RELIABILITY TUBES	
	Military Type No.	Description
2C51	*5670	H-f medium- μ twin triode
2D21	5727/2D21W	Thyratron
5Y3-GT	5Y3WGTB (RTMA 6087)	Full-wave rectifier
6AC7	6AC7WA (RTMA 6134)	Sharp-cutoff r-f pentode
6AK5	5654/6AK5W	Sharp-cutoff r-f pentode
6AL5	5726/6AL5W	Twin diode
6AQ5	6005/6AQ5W	Beam power amplifier
6AS6	5725/6AS6W	Dual-control sharp-cutoff r-f pentode
6AU6	6AU6WA (RTMA 6136)	Sharp-cutoff pentode
6BA6	5749/6BA6W	Remote-cutoff r-f pentode
6BE6	5750/6BE6W	Pentagrid converter
6C4	*6135	Medium- μ triode
6SK7	6SK7WA (RTMA 6137)	Remote-cutoff r-f pentode
6X4	**Not assigned (RTMA 6202)	7-pin full-wave rectifier
---	Not assigned (RTMA 6203)	9-pin full-wave rectifier
12AT7	12AT7WA (RTMA 6201)	High-Gm high- μ twin triode
12AU7	*5814-A	Medium- μ twin triode
12AX7	*5751	High- μ twin triode
12AY7	*6072	Low-noise high- μ twin triode
---	5686	Beam power amplifier

*Draws 1/6 more heater current. **Rated at 50 ma output current.

HIGH-RELIABILITY SUBMINIATURES

Military Type No.	Description	Military Type No.	Description
5718	Medium- μ triode	5896	Twin diode
5719	High- μ triode	5899	Semi-remote-cutoff pentode
5797	Semi-remote-cutoff pentode	5902	Beam power amplifier
5798	Medium- μ twin triode	6111	Medium- μ twin triode
5840	Sharp-cutoff r-f pentode	6112	High- μ twin triode

● TUBE DEPARTMENT REGIONAL SALES OFFICES ●

EASTERN REGION SALES OFFICE

General Electric Company,
Tube Department,
200 Main Avenue,
Clifton, N. J.
Telephone: GRegory 3-6387
N.Y.C. dial direct — WIsconsin 7-4065-6-7-8

CENTRAL REGION SALES OFFICE

General Electric Company,
Tube Department,
3800 North Milwaukee Avenue,
Chicago 41, Ill.
Telephone: SPring 7-1600

WESTERN REGION SALES OFFICE

General Electric Company,
Tube Department,
11840 West Olympic Boulevard,
Los Angeles, Calif.
Telephone: TRinity 3417



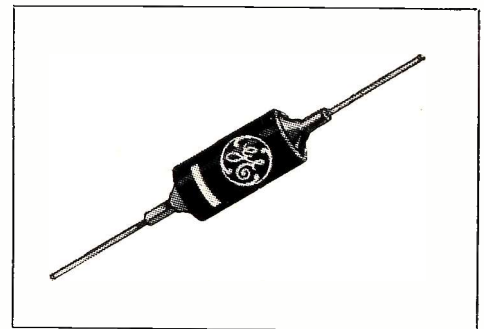
GERMANIUM PRODUCTS

An Entire Family of Germanium Products

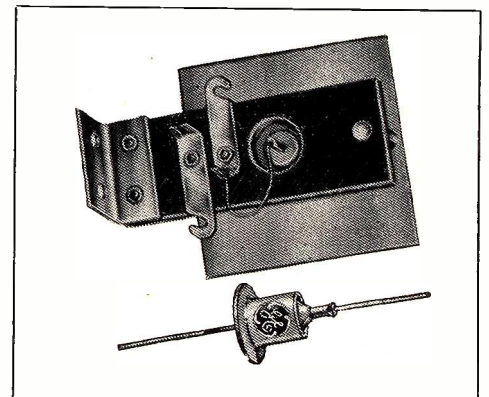
CATEGORY	RTMA DESIGNATION	G-E TYPE	PEAK INVERSE VOLTAGE	CONTIN. OPER. INV. VOLTAGE	MIN. FORWARD CURRENT (MA) AT + 1V	MAX. INV. CURRENT (μa) AT - 50V	AV RECTIFIED CURRENT (MA)	PEAK RECTIFIED CURRENT (MA)	SURGE CURRENT (MA)	
GENERAL PURPOSE	1N48	G5	85	70	4.0	833	50	150	400	
	1N51	G5C	50	40	2.5	1667	25	100	300	
	1N52	G5D	85	70	4.0	150	50	150	400	
	1N63	G5E	125	100	4.0	50	50	150	400	
	1N65	G5G	85	70	2.5	200	50	150	400	
	1N75	G5M	125	100	2.5	50	50	150	400	
TV	1N64	G5F	20	Min. dc current in 44 mc rectifier — 100 μa						
JAN	1N69	G5K	75	60	5.0	850	40	125	400	
	1N70	G5L	125	100	3.0	300	30	90	350	
	1N81	G5P	50	40	3.0	10@-10v	30	90	350	
VHF		G6	15	Min. Rect. Eff. at 100 mc and 2 v signal — 60%						
UHF	1N72	G7	{ 12 db max conv. loss @ 900 mc L.O. level & dc f'wd bias from 0.25V., 250 ohm source. }			25	75			
		G7A				25	75			
		G7B	5	{ 75% min. rect. eff. at 100 mc for detector }			25	75		
		G7C	5				25	75		
		G7D	5	{ Tested for sharpness of break }			25	75		
		G7E	5				25	75		
		G7F	5	{ E-I char. for freq. multiplier }			25	75		
		G7G	5				25	75		
MATCHED PAIRS Note (1)	1N48's	G8	85	70	4.0	833	50	150	400	
	1N52's	G8A	85	70	4.0	150	50	150	400	
	1N63's	G8B	125	100	4.0	50	50	150	400	
	1N75's	G8C	125	100	2.5	50	50	150	400	
QUADS	1N73	G9	75	Note (2)		50@-10v	22.5	60	100	
	1N74	G9A	75	Note (3)		50@-10v	22.5	60	100	
TRANSISTORS Note (4)	2N30	G11	{ Max. RMS emitter signal level — .3v; max. DC emitter current — 3 ma; Max. DC collector current—7.0 ma; power gain 17 db; collector dissipation 100 mw }							
	2N31	G11A								
DIFFUSED JUNCTION RECTIFIER	1N91	4JA1A1	100	30			150	470	25	
	1N92	4JA1A2	200	65	(ALL RATINGS AT 55°C)		100	310	25	
	1N93	4JA1A3	300	100			75	250	25	
	1N94	4JA2A4	380	185			500	1570	25	

- (1) Matched at +1v so that current through higher resistance unit is within 10% of lower resistance unit.
- (2) Consists of 4 balanced diodes. With 15 ma forward current; the voltage drop of each diode is 1.3v min. and 1.7v max., all diodes are within 0.1 volt of each other, and voltage drop of a pair is 0.03 volts of each other.

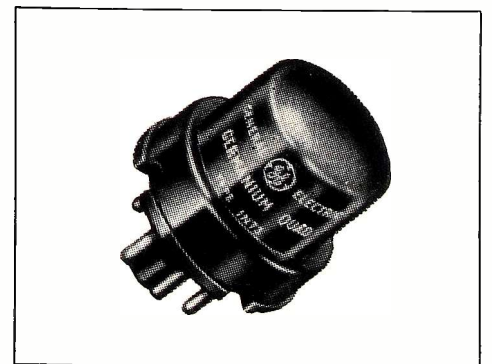
- (3) Consists of 4 balanced diodes. With 15 ma forward current; the voltage drop of each diode is 1.2v min. and 1.8v max., all diodes are within 0.2v of each other, and voltage drop of a pair is 0.1v of each other.
- (4) Additional test over G11 for negative resistance of base current vs. base voltage characteristic for trigger circuit operation.



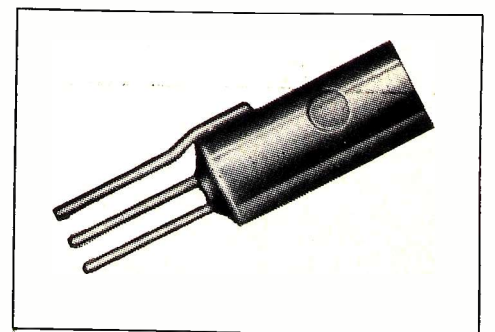
WELDED GERMANIUM DIODES



DIFFUSED JUNCTION GERMANIUM RECTIFIERS



GERMANIUM QUADS

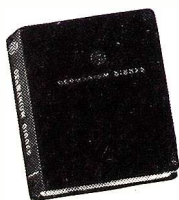


POINT CONTACT TRANSISTORS

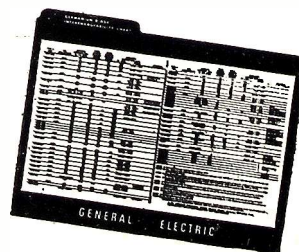
SEND FOR THIS HANDY REFERENCE MATERIAL

GERMANIUM DIODE HANDBOOK, complete specifications on G-E germanium diode products. Contains diode and rectifier characteristics and applications, curves on resistance, voltage, temperature, efficiency, circuit diagrams covering AM, FM and TV receivers, radar, carrier current. \$1.25 post-paid. Send check or money order to: General Electric Company, Section 763-2, Electronics Park, Syracuse, New York.

GERMANIUM DIODE INTERCHANGEABILITY CHART is free upon request.



GERMANIUM DIODE HANDBOOK



GERMANIUM DIODE INTERCHANGEABILITY CHART

OSCILLOSCOPE — Type ST-2B

Better high frequency response than any other scope in its field! Permits a choice of short, medium or long persistence CR tubes. Incorporates identical direct coupled vertical and horizontal amplifiers.

SPECIFICATIONS

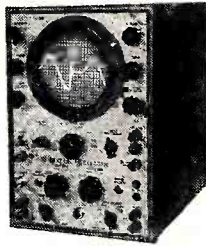
Freq. Response—DC to 400 kc at 2db—Identical amplifiers
Sensitivity—AC 10 mv/in. rms—DC 28mv DC/in.
Low Capacity probe—freq. resp. 2 cycles to 400 kc of 2db
Sweep—Triggered or recurrent 2 cycles to 30 kc
Built-in Calibrator—0.1 to 300 volts peak to peak

**OSCILLOSCOPE — Type ST-2A**

Excellent for head-end position work. Unsurpassed for stability and fine trace. Delivers maximum sensitivity without sacrifice of frequency response. Use it to check hum, noise, distortion, modulation. Fits many applications where waveform study is essential.

SPECIFICATIONS

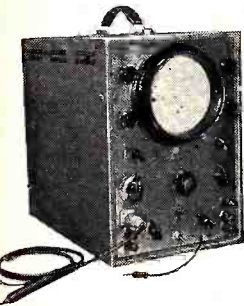
Vertical Freq. Response—20 cycles to 500 kc at 2db
Horizontal Freq. Response—10 cycles to 100 kc
Sensitivity—AC 15 mv/in. rms—DC 2 volts DC/in.
Low Capacity probe available—200mv/in. rms
Sweep—Hard tube sweep 10 cycles to 100 kc
Built-in Calibrator—0.3 to 300 volts peak to peak

**OSCILLOSCOPE — Type ST-2C**

A 5" scope for general purpose work. Particularly useful for maintenance of microwave installations and television stations. Wide frequency response without recourse to peaked amplifier coupling circuits, resulting in excellent transient response.

SPECIFICATIONS

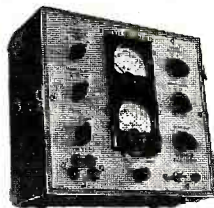
Vertical Freq. Response—20 cycles to 3 mc
Horizontal Freq. Response—10 cycles to 100 kc
Sensitivity—75 mv/in. rms
Low Capacity probe available—Sens. 1 volt/in. rms
Sweep—Recurrent hard tube sweep 10 cycles to 100 kc
Built-in Calibrator—0.3 to 300 volts peak to peak

**GERMANIUM DIODE CHECKER — ST-12A**

For use in laboratories, quality control groups, service shops. Measures the static characteristics of diodes.

SPECIFICATIONS

Forward Ranges—Current—0.3, 1.2, 6 and 12 ma full scale. Voltage—.3 and 1.2 v full scale.
Inverse Ranges—Current—60, 120, 300 and 1200 ua full scale. Voltage—3, 12 and 120 v full scale.
Power requirements—105-125 v, 60/60 cycle, approx. 10 w.

**INDUSTRIAL TUBE ANALYZER — YTW-3**

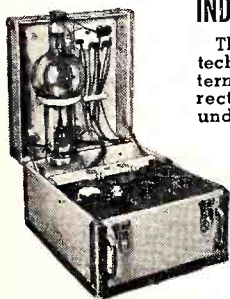
This portable equipment is designed so that non-technical personnel can quickly and efficiently determine the performance of mercury vapor and gas rectifier tubes by measuring the arc drop voltage under load.

SPECIFICATIONS

Peak Current Range—1 amp. — 100 amp.
Filament Voltage Range—High (4-7V). Low (2-3.5V).
Arc Drop Measurement Accuracy— $\pm 2\%$.
Oper. Temp. Reading Accuracy— $\pm 5\%$ at 38°C.

Tube Complement—2 Type 502A, 1 Type VR-105,
1 Type 5Y3GT and 1NE-17

Amb. Temp.—0°—35° Centigrade. (Tubes would not reach operating temperature in ambient temperature below 15° without heat retaining cover.)

**BINARY SCALER Model 4SN1A3**

Provides scale of 2 in self-contained unit that cuts installation and maintenance to a minimum. Suitable for direct coupling—no intermediate stages necessary. Fits standard octal socket. Speeds up to 200 kc. Resolution time 5 microseconds.

**SWEEP GENERATOR — Type ST-4A**

Variable Permeability Sweep completely electronic, with no moving parts. For TV receiver maintenance, TV production and development laboratories, wide band amplifier study, transmission line impedance measurements.

SPECIFICATIONS

Freq. Range—Continuously variable, 4 to 110 mc; 170 to 220 mc
Sweep Width—Linear from 500 kc to greater than 15 mc
Output Voltage—Greater than 0.1 volts from 4 to 110 mc
Greater than 0.5 volts from 170 to 220 mc
Attenuation—Continuously variable down to 20 microvolts
Leakage—Stray field—less than 10 microvolts induced in 2 in. loop 6 in. from case in any direction
Phase Range Control—Greater than 360 degrees

**MARKER GENERATOR — ST-5A**

Functions as a crystal referenced calibrator from 10 mc. to 300 mc. When used with the General Electric sweep generator, it provides a multiple of crystal controlled markers spaced 1.5 or 4.5 mc. apart . . . and can be used to supply a marker or markers at any frequency from 10 mc. to 900 mc.

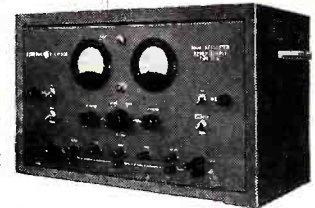
TV APPLICATION—12 crystal controlled channel frequency picture markers plus an accurate hand calibrated VFO covering the range of 20 to 50 mc. makes this unit directly applicable to TV alignment problems.

**DUAL REGULATED POWER SUPPLY**

Type ST-9A Has twin outputs and features electronic overload protection. Instruments cannot be harmed by short circuits on the regulated outputs. Built-in modulator permits observation of hum and noise tolerances by duplicating them on the equipment.

SPECIFICATIONS

#1 Regulated—Continuously variable, 0-500 v, max. current 100 ma. #2 Regulated—Same as #1
Parallel #1 and #2—Continuously variable, 0-500 v, max. current 150 ma
Unregulated—Approx. 650 volts no load, max. current 200 ma
—75 Volts—VR tube regulation, 0.2 ma —150 Volts—VR tube regulation, 0.4 ma
Filament Supply—6.3 volts a-c at 10 amps Regulation—Better than $\frac{1}{2}\% \pm \frac{1}{2}\%$ volt
Ripple and Noise—Less than 10 mv p to p on all regulated outputs

**POWER SUPPLY — Type YPD-2**

A high-quality, electronically regulated unit designed for use in laboratories, broadcast stations, and wherever a closely regulated variable DC voltage source at medium current consumption is required.

SPECIFICATIONS

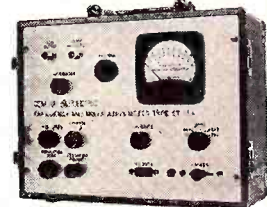
DC Voltage Output—250-450 v, (positive or negative may be grounded to chassis)
DC current Output—0-300 milliamperes
AC Output—6.3 volts 10 amperes unregulated
Regulation—Less than 1% from minimum to maximum current
Ripple—Less than 5 mv peak to peak
Output Impedance—Approximately 2 ohms at 30 cycles, decreases with increasing frequency

FREQUENCY AND MODULATION METER — Type ST-13A

Quality FM Communications meter. Gives hairline accuracy plus provision with oven accessories for future split-channel adjustments. Measures both carrier frequency displacement and modulation. Accessories include External antenna mount and cable.

SPECIFICATIONS

Freq. Ranges—One or two specified frequencies in the following ranges: 25 mc to 50 mc, 72 mc to 76 mc, 148 mc to 174 mc
Reference Oscillator Accuracy—.001% from 32°F to 122°F.
External connection, internal wiring and a socket provided for 6 V oven operation where wider temperature range with greater accuracy is required.
Inputs—18 in. collapsible whip antenna and fifty-ohm BNC connector.
Outputs—Low and high RF outputs for receiver alignment.
Power—Internal batteries.

**NEW COMPLETE CATALOG**

Complete specifications, descriptions, charts, and photographs of G-E electronic test equipment. Write today for your copy: General Electric Co., Section 763-1, Electronics Park, Syracuse, New York.

MAGNET WIRE



Sample of Formex wire (top) compared with enamel wire (bottom) after heat shock test at 150 C

Formex*: Formex magnet wire, because of the physical properties of its insulating film, maintains its dielectric strength throughout normal service longer than oleo-resinous enameled wires. Its abrasion resistance, flexibility, resistance to heat shock and film adhesion are superior features of Formex and enable it to retain its electrical properties under severe usage and service. Formex wire is outstanding in its resistance to moisture absorption and is highly resistant to commonly used solvents. These and many other special features make Formex magnet wire ideally suited for electronic applications.

FEATURES OF FORMEX MAGNET WIRE:

TAKES LESS SPACE: Because of its construction, the winding-space factor of Formex wire is considerably higher than for other types, thereby making appreciable savings by getting the same amount of energy out of a smaller machine.

EASY TO WIND: Its thin film makes Formex wire easy to bend and its smoothness permits the turns of the coil to fall readily into place.

MORE FEET PER POUND: Because there are more feet of wire in a pound of Formex wire than in a fibrous-insulated type, important savings are effected.

FACILITATES MANUFACTURE: With its tough and abrasion-resistant covering, Formex will stand up under the severe treatment of high-speed winding and assembly operations. Thus, it is possible to accelerate production, reduce factory rejects, and realize over-all lower manufacturing costs.

PROPERTIES OF FORMEX MAGNET WIRE

DIELECTRIC STRENGTH: Formex, because of the physical properties of the insulating film, maintains its dielectric strength during winding, assembly, varnish treatment, and life of the apparatus in which the wire is used.

POWER FACTOR: The power loss in a radio-frequency coil depends in part on the dielectric power loss in the insulation. Reliable tests show the improvement which Formex wire represents over conventional enameled wire in this respect.

TOUGHNESS: Film toughness is the property which enables magnet wire to maintain its electrical properties under the severe treatments incidental to its application to electric machines and operation in service. Formex rates high in the following related properties: Abrasion Resistance, Flexibility, Resistance to Heat Shock, and Adhesion of Film.

HEAT AND SHELF AGING: Comparative heat-aging tests produce less effect on Formex than on other types of magnet wire. Formex wires have been subjected to shelf aging for more than four years with no measurable effect on the film.

TEMPERATURE RATING: The film on Formex wire is organic and, as such, falls under AIEE Standards for Class A insulating materials which have a temperature rating of 105 C.

MOISTURE RESISTANCE: In moisture absorption, there is little difference between the performance of Formex wire and that of conventional enameled wire. In continuity, however, the physical make-up and properties of Formex wire assure continuity after the apparatus is wound and ready for service.

SOLVENT RESISTANCE: Formex wire is resistant to deleterious action from practically all commonly used solvents.

Varnish Treatments: Because Formex wire is highly resistant to the action of varnish solvents and heat shock. Formex wire wound assemblies may be subjected successfully to varnish solvents, to baking temperatures, and to baking cycles which must be avoided or used only with extreme caution on assemblies that are wound with conventional types of enameled wire.

Deltabeston*: Deltabeston magnet wire insulated with glass or asbestos is unsurpassed in performance where extreme heat, grease, oil, corrosive vapors, and other severe operating conditions exist. This feature makes Deltabeston extremely valuable in certain communications equipment and gear and in industrial electronic equipment. It has great flexibility, exceptional dielectric strength, heat resistance, abrasion and shock resistance.

FORMEX WIRE TYPES AVAILABLE ROUND FORMEX WIRE

Range of sizes includes all those covered by the NEMA General Standards for Vinyl-acetal-insulated Magnet Wire, comprising 4 Awg (0.204 in.) to .001".

RECTANGULAR AND SQUARE FORMEX WIRE

Rectangular and square Formex also available in a complete range of sizes.

COLORED FORMEX WIRE

To permit a positive, quick identification of circuits, Formex is available with color in the Formex enamel. One solid color (not a tracer) is always provided. Standard colors are green and yellow.

DELTABESTON TYPES AVAILABLE

Asbestos Insulated..... Class B-125C max
Glass Insulated..... Class B-125C max

Both types available for Class H applications by use of silicone adhesives and impregnating compounds.

Magnet Wire Film-insulated with Teflon†

For application involving continuous high temperatures up to 200 C, intermittent high temperatures up to 250 C.

TYPES AVAILABLE

Magnet Wire Single Film-insulated with Teflon

Sizes 20 through 44 Awg. Film thickness is equal to single Formex of equivalent size.

Magnet Wire Heavy Film-insulated with Teflon

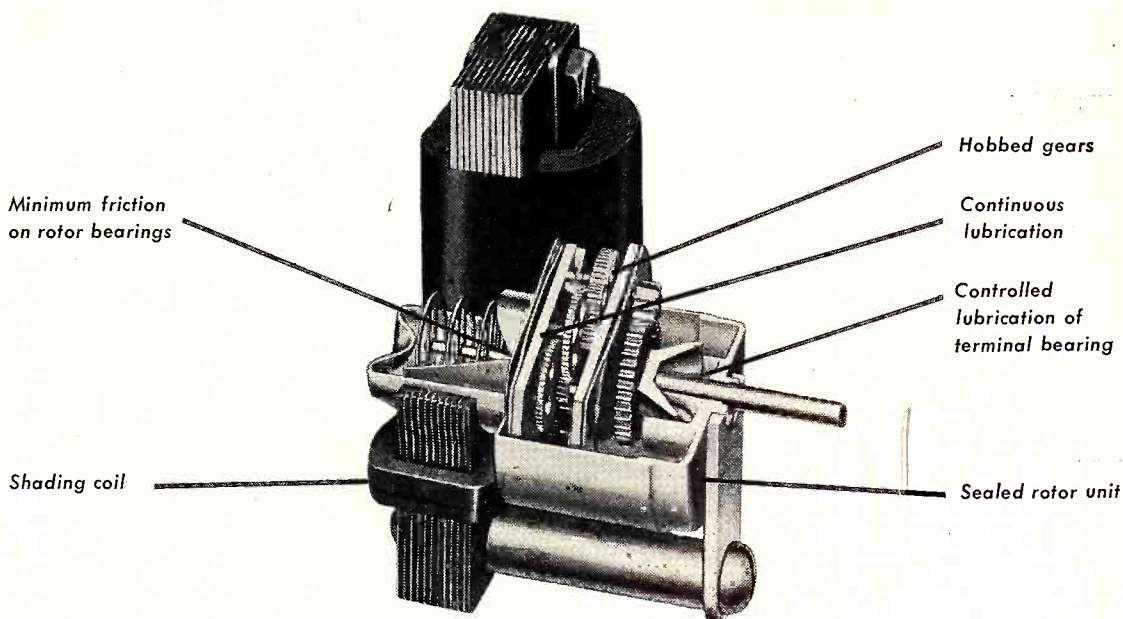
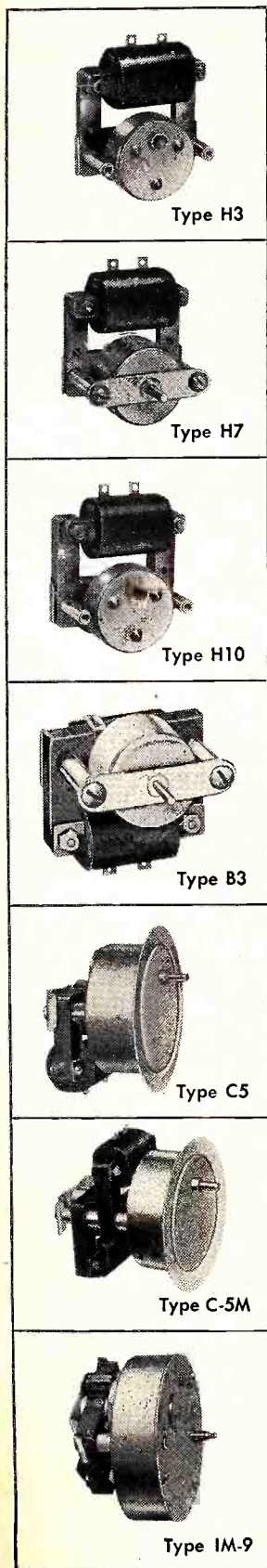
Sizes 20 through 40Awg. Film thickness is equal to heavy Formex of equivalent size.

*Registered Trade-mark of General Electric Company
†DuPont trade-mark for tetrafluorethylene resin

DATA ON FINE FORMEX WIRE Dimension in inches

Awg	Bare Diam	Tolerance	Ft/Lb Bare	F		Ft/Lb	HF		Ohms/ Ft Nom	Ohms/ Ft Max	
				Min In.	Max In.		Min In.	Max In.			
41	.0028	±.0001	42100	.0002	.0032	40800	.0005	.0007	40000	1.32	1.42
42	.0025	±.0001	52900	.0002	.0029	51400	.0004	.0006	50400	1.66	1.800
43	.0022	±.0001	68200	.00015	.0025	66000	.0004	.0006	64500	2.14	2.35
44	.0020	±.0001	82500	.0001	.0023	79600	.0004	.0006	77600	2.59	2.87
	.00175	±.00005	108000	.0001	.00205	104000	.0003	.0005	102000	3.39	3.59
	.00150	±.00005	147000	.0001	.00180	142000	.0003	.0005	138000	4.61	4.93
	.00125	±.00005	211000	.0001	.00145	203000	.0002	.0004	199000	6.64	7.20
	.0010	±.00005	330000	.0001	.00125	319000	.0002	.0004	306000	10.37	11.53

Telechron Synchronous Timing Motors



For automatic devices, instruments, control equipment—wherever time is a factor in product performance—Telechron Synchronous Timing Motors are your best assurance of dependability.

Telechron motors are CONTINUOUSLY ACCURATE . . . because they're true synchronous motors with one rotation for every cycle of the alternating current source. Lightweight rotors enable virtually INSTANT SELF-STARTING . . . reach full speed in approximately 3 cycles. All gears and bearings are PERMANENTLY LUBRICATED . . . by a generous

oil reservoir sealed into the dust-free rotor unit.

With Telechron motors, you get the benefit of dependable Application Engineering Service. Engineering specialists in timing problems study your requirements . . . torque, temperature limits, running period, etc. . . . recommend the motor best suited, and at lowest cost.

Write for complete catalog and application data sheet. Telechron Department, General Electric Company, 602 Homer Ave., Ashland, Massachusetts.

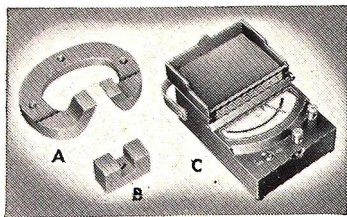
SPECIFICATIONS

Type	Speed* of Rotation	Torque—pound-inches			Rated watts input	Over-all dimensions (inches)	Net Wt. (oz.)	Shipping Wt. (lbs.)
		60 cy.	50 cy.	25 cy.				
H3	3.6 rpm.	.018	.018	.018	2	2-11/64 x 2-3/4 x 1-9/32	7	2
H7	1, 2, 3, 4, 6 rpm.	.375	.375	.375	2	2-17/64 x 2-3/4 x 1-63/64	10	2
H10	3.6	.018**	.018**	.018**	5	2-3/16 x 2-9/16 x 1-5/16	9	2
B3	1/2 rpm.	.375	.375	.375	4	2-5/16 x 2-1/2 x 2-3/8	10	1-1/2
	1	.375	.340	.240				
	2	.19	.17	.12				
	4	.10	.09	.06				
	60	.006	.006	.004				
C5	1 rpm.	1.0	0.8	0.4	6	3-3/8 x 3-9/16 x 2-13/16	22	2
	2	0.5	0.4	0.2				
	4	0.25	0.2	0.1				
C5M	1 rpm.	2.00	1.60	0.80	12	3-3/8 x 3-3/4 x 3-3/4	32	2-1/2
	2	1.00	0.80	0.40				
	4	0.50	0.40	0.20				
IM-9***	1 rev. in any of following periods: Minutes—5, 15, 30, 60 Hours—1, 2, 3, 4, 6, 8, 12, 24 Days—1, 2, 3, 7, 14, 30					3-1/2 x 3-1/2 x 2-11/16	18	2

* Standard direction of rotation facing terminal shaft end—clockwise, except for IM-9 which is counter-clockwise. Reversible rotation available in some models.

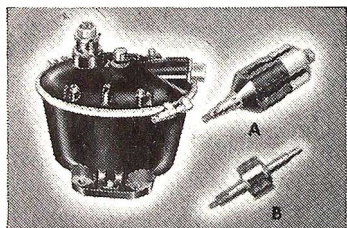
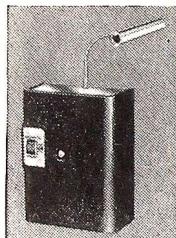
** Intermittent maximum peak torque .375 dependent on duty cycle.

*** Type IM-9 provides a totally enclosed circular gear train. Adaptable to most instrumentation and especially for chart drives. Has special backlash eliminators.



INSTRUMENTS— Fig. A is damping magnet once used in GE indicator. B is Carboly magnet now used . . . permitting smaller design, cutting costs, improving calibrations.

CONTROLS— Fan control uses Carboly magnet because (1) It occupies small space and gives higher energy per unit per space. (2) Offers higher stability. (3) Cost is low.



MAGNETOS—To save weight, Scintilla magneto features new rotor made with Carboly permanent magnet (B) to replace old rotor (A). Rotor weight is cut 100 percent.

MINIATURE MOTORS— One tiny Carboly magnet replaces electromagnet and components . . .



makes possible the small design of this battery-operated motor. Magnet gives years of dependable service.

IMPROVE YOUR ELECTRICAL PRODUCTS WITH CARBOLOY PERMANENT MAGNETS

Interested in improving your product? . . . having it weigh less and cost less to build?

Then throw away that electromagnet. *Replace it now with a high-energy Carboly permanent magnet!*

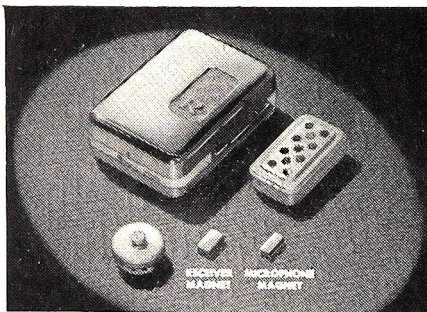
Hundreds of manufacturers in the field of electronic and electrical devices have done just this. More are doing it every day. The illustrated applications on this page show you some typical results.

For more evidence . . . and for expert engineering advice and design assistance, contact the Carboly organization *now*. Skilled Carboly magnet men are at your service. Carboly production lines can supply you with high-quality magnets to meet your most exacting specifications. All sizes, all shapes available; cast or sintered.

Send today for free Carboly Magnet Design Manual PM-101 and for Standard Stock Catalog PM-100.

OUTSTANDING ADVANTAGES OF CARBOLOY PERMANENT MAGNETS

- 1 Cool—generate no heat
- 2 Require no electrical energy
- 3 Cost nothing to operate
- 4 Eliminate coils, windings, wiring, etc.
- 5 Need no maintenance—no coils to burn out, no slip rings to clean or replace, etc.
- 6 Simplify mechanical assemblies—exert strong tractive force for holding, lifting and separating devices that eliminates component parts, makes product design and fabrication simple.
- 7 Save space—great magnetic strength in small sizes
- 8 Powerful—and power is constant
- 9 Combine electrical and mechanical features—transform electrical energy into mechanical motion; mechanical motion into electrical energy
- 10 No power failures ever
- 11 Resist moisture—no coils to collect dampness
- 12 Give uninterrupted operation
- 13 Create savings—often eliminate costly, power-supplying parts
- 14 Simple—no operating parts
- 15 Reduce weight, product size
- 16 Supply a permanent source of energy



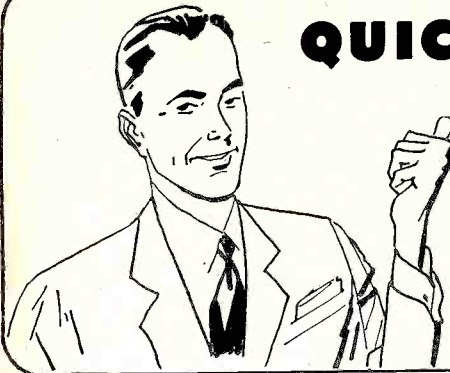
HEARING AIDS—New all-transistor, all-magnetic "Radioear" uses Carboly magnets in both receiver and microphone. Magnets eliminate failure once caused by high operating temperatures.

CARBOLOY
DEPARTMENT OF GENERAL ELECTRIC COMPANY
11139 E. 8 Mile Drive, Detroit 32, Michigan

"Carboly" is the registered trademark of the Carboly Department of General Electric Company

PROPERTIES OF CAST ALNICO	ALNICO GRADE						PROPERTIES OF SINTERED ALNICO	ALNICO GRADE		
	2	3	4	5	6	7		2	4	5
Average Density—Lbs. per cu. in.	.256	.249	.253	.264	.268	.259	Average Density—Lbs. per cu. in.	.243	.232	.241
Resistivity—Microhms per cm. per cm. ² at 25°C	65	60	75	47	50	58	Resistivity—Microhms per cm. per cm. ² at 25°C	68	68	—
Mean Coef. of Expansion per °C (× 10 ⁻⁶) 20°C—300°C	12.4	13.0	13.1	11.3	11.4	11.4	Tensile Strength—Lbs. per sq. in.	65,000	60,000	—
Tensile Strength—Lbs. per sq. in.	3,000	12,000	9,100	5,450	23,000	—	Transverse Modulus of Rupture—Lbs. per sq. in.	70,000	85,000	—
Transverse Modulus of Rupture—Lbs. per sq. in.	-7,200	22,500	24,000	10,500	45,000	—	Hardness—Rockwell C	43	42	44
Hardness—Rockwell C	45	45	45	50	56	60	Coefficient of Thermal Expansion	12.4	13.1	11.3
Min. Residual Induction Br.	7,200	6,700	5,200	12,000	10,000	7,200	Min. Residual Br.	6,900	5,200	10,000
Min. Coercive H.	540	450	700	575	750	1,050	Min. Coercive H.	520	700	575

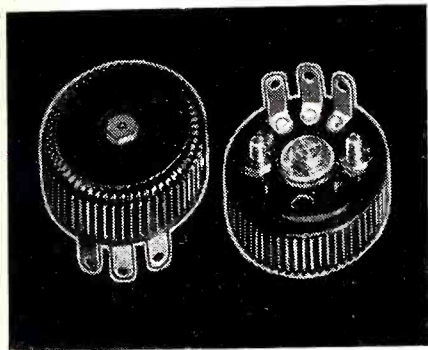
QUICK FACTS ON **Centralab**



BIG 5

... electronic components
that make a big difference
in electronic design,
manufacture and performance

1 VARIABLE RESISTORS most complete line to cut down size, weight and cost

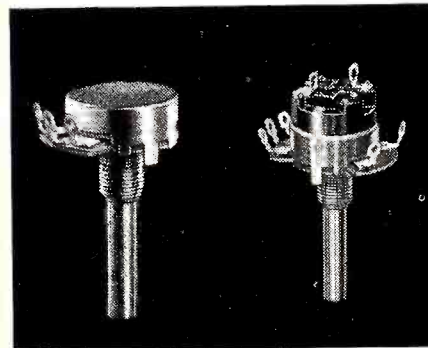


Model 1 Radiohm®—world's smallest resistor with the longest list of uses

Widely used as standard for hearing aids plus many other commercial and military miniature applications. Its $\frac{5}{8}$ " diameter makes it no larger than a dime. Shielded from dust, lint, etc. Rated at $\frac{1}{10}$ watt. Available in a re-

sistance range of 500 ohms to 10 megohms, with 7 standard tapers. Plain or switch types. New Hi-Torque model has rotational torque of 3.0 ounce-inches. Knob or slotted shaft types.

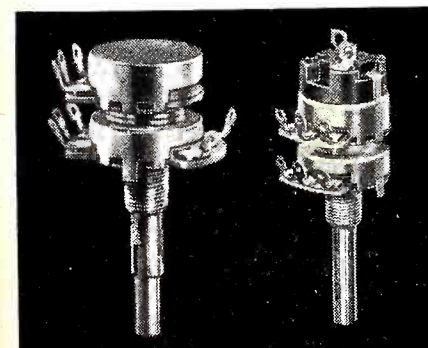
Ask for Bulletin 42-158.



Model 2 Radiohm®, plain or switch types

Precision controls that are only $\frac{15}{16}$ " in diameter. Rated at $\frac{1}{2}$ watt. Velvet smooth, low noise level operation. Shafts of various types and lengths to your specifications. Ratings from 500 to 15 megohms. Standard or special

tapers. Resistance tolerances to meet your requirements. Plain or switch types, 1-5-8 amps. Phenolic base resists humidity. Many switch combinations provide wide variation at minimum cost. Ask for Bulletin 42-85.

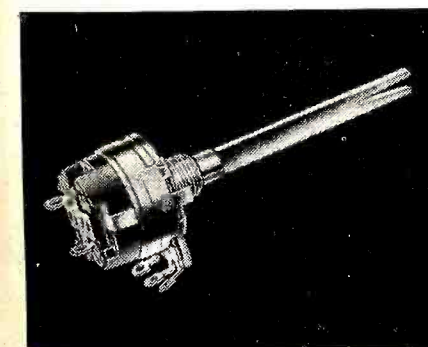


Model 2 Radiohm®, dual and twin types

Size — $\frac{15}{16}$ " diameter. Rated $\frac{1}{2}$ watt. Two- or three-ganged. Single or concentric shafts, of various types and lengths to meet your specifications. Tap or plain tapers. Ratings from 500 to 15 megohms. Resistance tolerances

to meet your requirements. Plain or switch types, 1-5-8 amps. Many switch combinations provide wide variations for design and application. Meet JAN R94 characteristic U requirements.

Ask for Bulletin 42-85.



Quick delivery EXPRESS Radiohms® for immediate production needs

A real time saver! Ideal for the manufacturer needing variable resistors on short notice. Delivery in a few days. Control elements are stocked items. When order is received, desired shafts are staked directly to control elements. Shafts fit standard RTMA

split-knurl and many spring-type push-on knobs. Rated $\frac{1}{2}$ watt. Available in two values $\frac{1}{2}$ and 1 megohm, audio taper (C2) with SPST a-c line switch. Values meet 75% of requirements for switch-type variable resistors.

Ask for Bulletin 42-163.

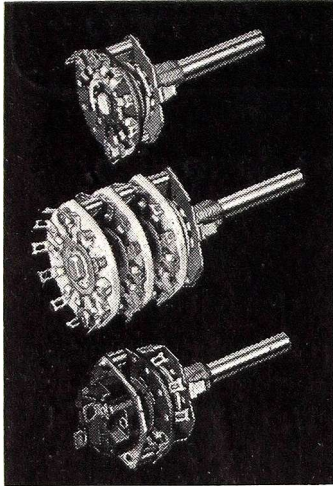
CENTRALAB'S BIG 5 MAKE A BIG DIFFERENCE IN

2

SWITCHES — a lot more switch in a lot smaller package

MINIATURE SWITCHES — for low-current, high-frequency applications

Series 20

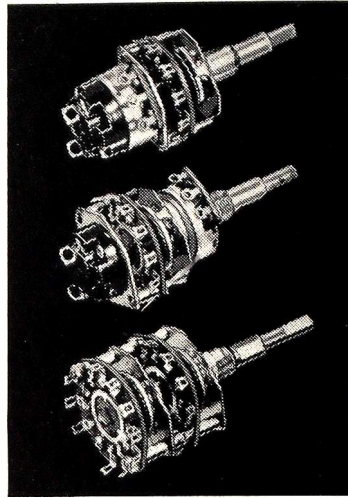


Bolted-Construction type (20a)
Unusually small rotary switches. Only $1\frac{5}{16}$ " dia. Give you quality and flexibility not heretofore available in miniatures. Available in multiple sections with phenolic or steatite insulation. Can be supplied in 2 to 12 positions. 30° positive indexing. Steatite is grade L-5. Meets JAN I-8 specs.

Staked-construction type (20b)

Available in up to two sections with phenolic insulation. Same positions and size as bolted switch. Both types can be supplied with a-c line switch, added as a rear section. Phenolic is grade LTS-E5 or JAN P-13. For complete details—ask for Bulletin 42-156.

Series 30



Last word in conserving panel and chassis space! Dual combinations of $1\frac{5}{16}$ " diameter switches and $1\frac{5}{16}$ " diameter variable resistors. Furnished in three types. Same switching combinations as Series 20.

Series 30a — Rotary switch mounted in front, control mounted in rear.

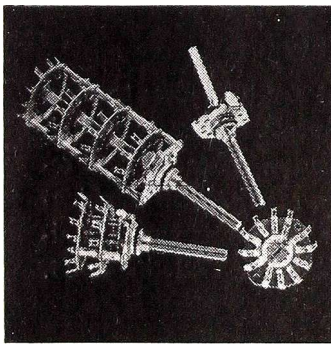
Series 30b — Control mounted in front, rotary switch mounted in rear.

Series 30c — Two rotary switches independently operated by concentric shafts.

For complete details ask for Bulletin 42-157.

Material specifications on clips, contacts, shafts, etc. and other hardware same as standard switches below.

Standard phenolic

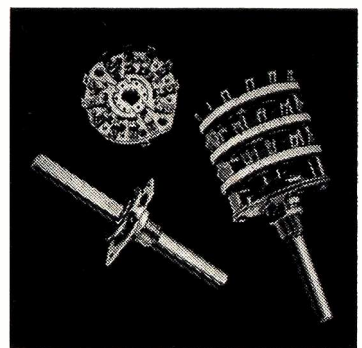


STANDARD SWITCHES

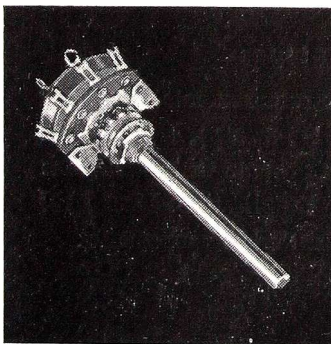
for a wide variety of electronic applications

Available in standard or special switching combinations in single or multiple sections. Cadmium nickel plated parts as well as silver plated brass clips and contacts are standard. Silver alloy clips and contacts available on special order. Salt-spray specifications can be substituted on special order. Switches have double-wiping contacts. 30° - 60° indexing. Various index and clip types for your specific application. Phenolic is grade LTS-E5. Ceramic has extra-heavy current carrying ability. JAN-approved grade L-5 Steatite insulation is non-hygroscopic.

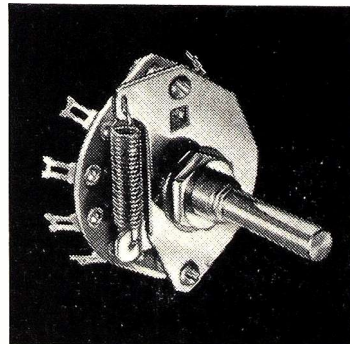
Standard Ceramic



Tone Switches



Widely used in radio-phonograph and allied sound equipment. Available with 3-4-6-8-9 or 10 clips, in SPST, SPDT, DPST and DPDT Models. Shorting and non-shorting contacts. Positive index. Can be supplied with a-c line switch. Specifications same as standard phenolic switches.

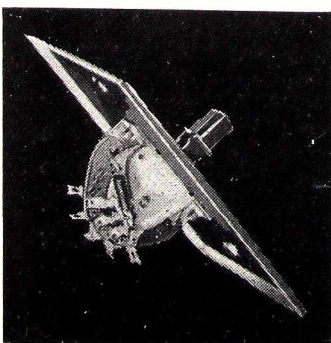


Spring Return Switches

PA and intercom switch types. Coil spring design means smoother action, more positive indexing — longer life. Available with one or two spring return positions. 30° index. Index spring is tested for a minimum life of 150,000 cycles.

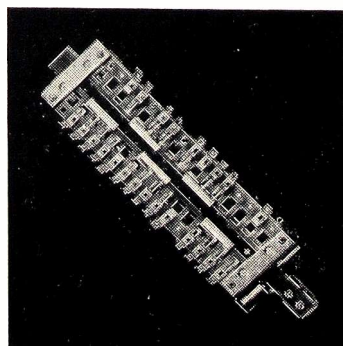
Ask for Bulletin 995.

Lever Switches



For smoother action, positive indexing on speech input equipment, etc. Spring tested for minimum 150,000 switching cycles. 8 basic indexing combinations. Available in positive, spring return or combination. Shorting and non-shorting types, 2 to 4 poles, 2 and 3 positions. Mounting plates available.

Ask for Bulletin 42-141.

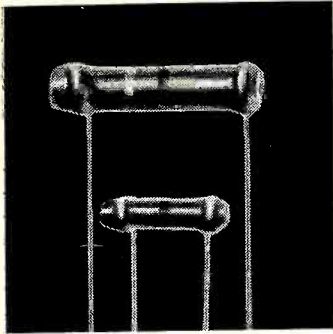


Slide Switches

For improved performance. Flat horizontal design saves space, reduces lead inductance. Wide silver-plated brass contacts. Length variable from 5 to 20 clips per side. Double-wipe clips assure constant pressure. Positive coil spring index — with 2, 3 or 4 positions.

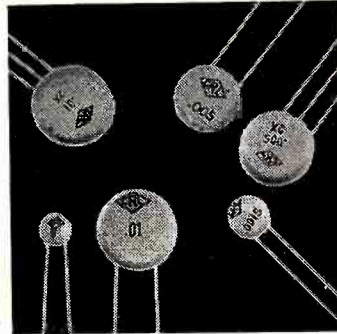
Ask for Bulletin 953.

3 CAPACITORS — closer tolerances, more values to choose from



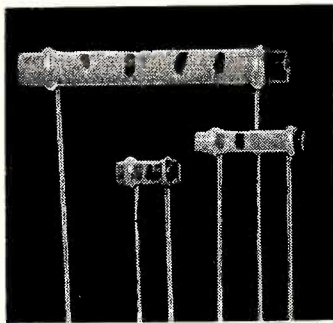
BC Tubular

Ideal for use in r.f. by-pass, audio coupling applications and general circuit use. Available from 1 mmf to 10,000 mmf. Centralab's own Ceramic-X body withstands temperatures to 2200° F... makes capacitor impervious to moisture and low power factor. Insulated or non-insulated. Ask for Bulletin 42-3R.



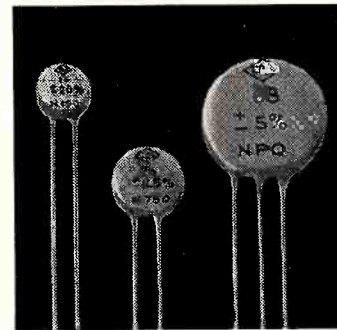
BC Discs

Ultra-compact — designed and pioneered by Centralab specifically to solve high-capacity, low-inductance, and small space requirements. Available in single-non-shielded dual and shielded dual types. Tolerances to your requirements. Ask for Bulletin 42-4R.



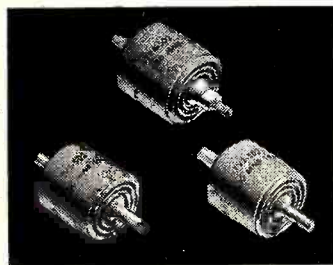
TC Tubular

Temperature compensating tubulars. Complete range of T.C. characteristics. Comply to preferred values as set up by RTMA. Meet JAN-C-20A specifications. Special values can be furnished, upon order. Temperature coefficient, voltages, capacity and tolerance in accordance with latest RTMA color codes. Ask for Bulletin 42-18.



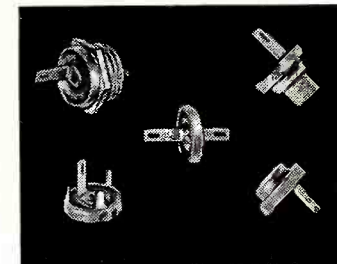
TC Discs

Extremely thin — only .156" max. Available in sizes 1/4", 3/8", 9/16" and 5/8" diameter. TC Tolerances — ± 30 PPM/°C or ± 15% whichever is greater and in accordance with JAN and RTMA test procedure for values less than 10 mmf. Insulation resistance 10,000 meg-ohms or greater.



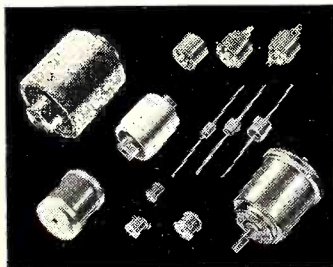
HI-VO Kaps®

Safest high-voltage capacitor available. Centralab's TV Hi-Vo Kaps are the standard for the TV industry, including UHF. 10 KV, 20 KV and 30 KV d-c. Will withstand continuous overload up to twice rated working voltage. Small diameter 1" to 1.4" maximum. Ask for Bulletin 42-10R.



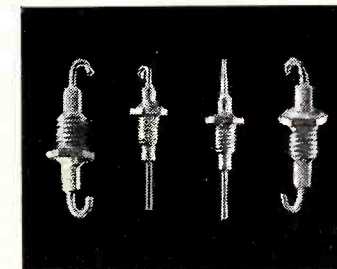
Stand-Off and Button-Style

Type S1 Tubular Stand-Off (50 to 2500 mmf) by-passes r.f. to ground in many HF, UHF and VHF circuits. Type S2 (5000 to 10,000 mmf). One end threaded for panel mounting. Ask for Bulletin 42-121R. Button style "Zippers" (T) — a long-life replacement for old-style mica "Buttons." Available in 5 different types. Used for by-passing in low-power, high-frequency applications. Ask for Bulletin 42-122R.



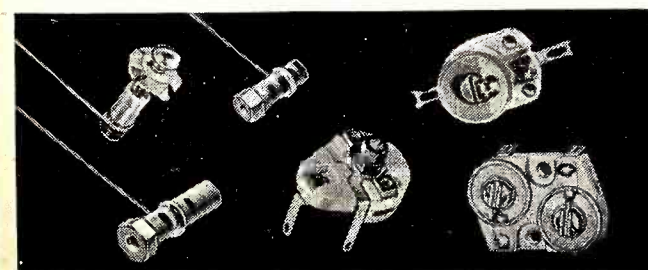
Transmitting and High Voltage, High Accuracy

Ideal for standard or mobile gear requiring close-held oscillator frequencies. Extremely low power factor and stable retrace characteristics. Eleven terminal styles. Capacitance: 3 to 1000 mmf, 5 KV to 40 KV d-c. Ask for Bulletin 42-102R.



Feed-Thru (FT) and Miniature Feed-Thru (MFT)

Designed for single-hole mounting with ground to chassis or shield. Type FT (500 to 2300 mmf) has .050" straight or hooked terminals for easy soldering. Bushing mounted. Type MFT (50 to 1000 mmf) eyelet-mounted. Smallest available in the widest capacitance range. Both types rated 500 v d-c.



Ceramic and Steatite Trimmers

Several types designed for greater stability to shock or vibration. Smaller, lighter, easier to mount in any position. Readily adjustable with screwdriver to full capacity range in 180° rotation. Rated 500 v d-c w. Available in dual or gauged units. Built to JAN-C-81. Examples:

Type 821 Miniature Ceramic Trimmer	Type 823 Ceramic Trimmer	Type 822 Ceramic Trimmer	Type 829 Tubular Ceramic Trimmer
Capacity ranges: 2.5 to 50 mmf maximum.	Medium-heavy steatite base. Eight capacity ranges: 5 to 125 mmf. max.	Medium weight steatite base. Five capacity ranges: 1.5 to 50 mmf maximum.	For TV and VHF. Body only .215" dia. Five capacity ranges: .5 to 10 mmf max. Bulletin 42-59.

Ask for Bulletin 42-101.

(T) Trade Mark.

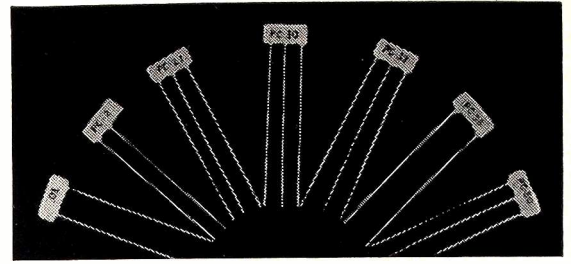
4

PRINTED ELECTRONIC CIRCUITS — pioneered by Centralab

... more than 25,000,000 in use

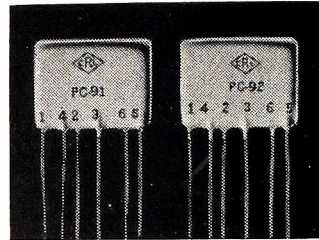
Small Plate Components

Smallest standard PEC's made by Centralab — excellent for miniature use. Immediately available. Minimum dimensions $1\frac{1}{32}$ " x $\frac{7}{32}$ " x $\frac{7}{64}$ ". Capacitors 150 v d-c w. Resistors $\frac{1}{8}$ watt. Single capacitors; dual capacitors; single resistors; dual resistors — in combinations; resistor-capacitor in series; resistor-capacitors in parallel. "Filpec," balanced diode load filter — has two capacitors and one resistor. ... offers a new approach to radio and TV manufacturing. Ask for Bulletin 42-132.



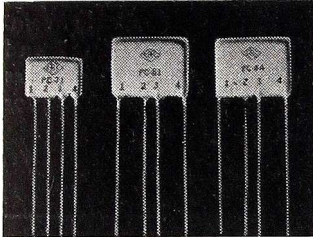
Pentode Couplates®

Require only 6 soldered connections. Completely new interstage coupling circuits of 3 capacitors and 3 resistors and a small 6-lead ceramic base. Compared with predecessors they actually reduce soldered connections 50%. Only $1\frac{1}{32}$ " x $\frac{13}{16}$ " x $\frac{11}{64}$ ". Three standard values available. Ask for Bulletin 42-128R.



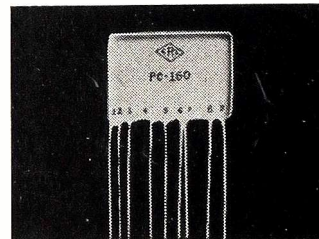
Triode Couplates®

Require only 4 soldered connections. Replace 5 components normally used in audio circuits. Are complete midget assemblies of 3 capacitors and 2 resistors bonded to a dielectric ceramic plate. Resistors — $\frac{1}{8}$ watt; Capacitors — 400 v d-c w. Ask for Bulletin 42-127.



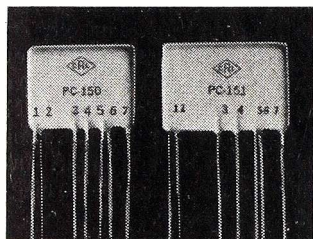
PENDET *

Another Centralab "first" in Printed Electronic Circuits. Consists of 5 capacitors and 4 resistors in a single plate with only 9 leads. Similar to the popular Audet. Couples the diodetriode and pentode tubes in output stage of a-c, d-c sets. Available in two standard values. Ask for Bulletin 42-149. *Trade Mark



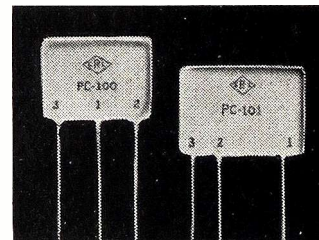
AUDET®

Extremely popular for miniature use. Furnish all values of all components generally found in output stage of a-c, d-c radio receivers. Provide 4 capacitors and 3 resistors — with only 7 leads. Resistors $\frac{1}{8}$ watt; capacitors, 400 v d-c w. Ask for Bulletin 42-129.



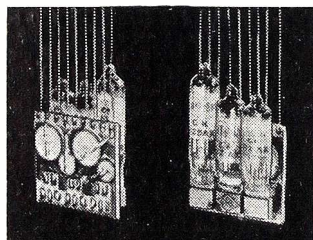
Vertical Integrators

Over 7,000,000 in use by major TV manufacturers. Assure big savings in assembly of TV vertical integrator networks. One type consists of 4 resistors and 4 capacitors brought out to 3 leads . . . reduces former 16 soldered connections to 3. Ask for Bulletin 42-126.



Ampec®

Latest outgrowth of Centralab's constant research in PEC development. Excellent for sub-miniature high gain audio use. 3-stage speech amplifier smaller than cover of ordinary book matches. Size: $1\frac{1}{32}$ " x $\frac{15}{16}$ " x $1\frac{1}{32}$ ". Capacitors, 100 v d-c w. Resistors, $\frac{1}{8}$ watt. For data on Model 2 and Model 3 — ask for Bulletins 42-117R — 42-130R.



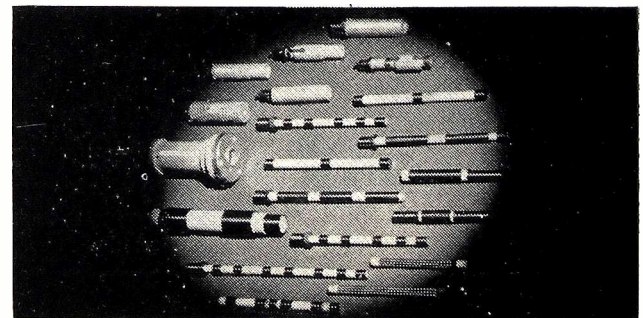
5

FINE CUSTOM CERAMICS — engineered to give you exact electrical and physical properties

Centralab modern engineered ceramics are a *new* answer to old design problems. They simplify a great number of industrial and electronic applications. A great variety of forms can be extruded, molded or pressed . . . drilled, ground and tapped . . . even metalized. All operations can be done to measured tolerances and very economically. You can choose from many exact formulas — comprising three basic types of materials — Steatite, Centradite, Zirconite. Steatite meets JAN-I-8 and JAN-I-10 requirements for Grade L-5 without exception.

* * *

You can put your confidence in Centralab electronic components. Each is the result of more than 20 years' experience, research development, production and close cooperation between Centralab and leading manufacturers in the field. For complete information — including taper curves, physical dimensions, engineering specifications, write direct, stating bulletins of interest. Or, if you prefer, contact your nearest Centralab representative. He will be glad to help you without obligation.



Centralab

A Division of Globe-Union Inc.
934-F East Keefe Avenue • Milwaukee 1, Wisconsin
In Canada, 635 Queen Street, East, Toronto, Canada

KEPCO VOLTAGE REGULATED POWER SUPPLIES

KEPCO MANUFACTURES THE MOST COMPLETE LINE OF DC VOLTAGE REGULATED POWER SUPPLIES. THESE UNITS ARE AVAILABLE AS STANDARD MODELS. WORKMANSHIP IS OF A QUALITY WITH THE HIGHEST EXISTING PRODUCTION STANDARDS AND BEST INSTRUMENT ELECTRONIC PRACTICES CONSISTENT WITH THE INTENDED USE OF THE ITEM AS A CONTINUOUS DUTY VOLTAGE REGULATED POWER SUPPLY.



Kepco Voltage Regulated Power Supplies are conservatively rated. The regulation specified for each unit is available under all line and load conditions within the range of the instrument.

Write for complete specifications.

MODEL 131

B SUPPLY: 100-325 volts, 150 ma.
REGULATION: 1/2% for both line, 105-125 volts, and load variations, 0-150 ma.
RIPPLE: 10 millivolts.
C SUPPLY: 0-150 volts, 5 ma.
REGULATION: 10 millivolts for line, 105-125 volts. 1/2% for load at 150 volts.
RIPPLE: 5 millivolts.
FILAMENT SUPPLY: 6.3 volts AC, 10 amp., CT.

MODEL 141

OUTPUT DC: 100-400 volts, 150 ma.
REGULATION: 1/2% for both line, 105-125 volts, and load variations, 0-150 ma.
RIPPLE: 10 millivolts.
OUTPUT AC: 6.3 volts, 10 amp., CT.

MODEL 150

OUTPUT DC: 0-150 volts, 50 ma.
REGULATION: 1/2% for both line, 105-125 volts, and load variations, 0-50 ma.
RIPPLE: 5 millivolts.

MODEL 245

OUTPUT DC: 200-500 volts, 200 ma.
REGULATION: 1/2% for both line, 105-125 volts, and load variations, 0-200 ma.
RIPPLE: 10 millivolts.
OUTPUT AC: 6.3 volts, 6 amp., CT.
 Available with rack mounting.

VOLTS	CURRENT	REGULATION	RIPPLE	6.3 V.† AC. CT.	MODEL
0-1500	0-200 Ma.	0.5%	20 Mv.		1520
0-1200	0-20 Ma.	0.1%	10 Mv.	10 Amp.	1220
0-1000	0-500 Ma.	0.5%	20 Mv.		1350
200-1000	0-500 Ma.	0.5%	20 Mv.		1250
0-1000	0-50 Ma.	0.1%	10 Mv.	10 Amp.	1020
0-600	0-3 Amp.	0.5%	10 Mv.		780
0-600	0-2.25 Amp.	0.5%	10 Mv.		770
0-600	0-1.5 Amp.	0.5%	10 Mv.		760
0-600	0-750 Ma.	0.5%	10 Mv.		750
0-600	0-300 Ma.	0.5%	5 Mv.	10 Amp.	615
0-150 Bias	0-5 Ma.	*	5 Mv.		
0-600	0-300 Ma.	0.5%	5 Mv.	10 Amp.	500R
#1 0-600	0-200 Ma.	0.5%	5 Mv.	10 Amp.	800
#2 0-600	0-200 Ma.	0.5%	5 Mv.	10 Amp.	
0-600	0-200 Ma.	0.5%	5 Mv.	10 Amp.	815
0-150 Bias	0-5 Ma.	*	5 Mv.		
#1 200-500	0-200 Ma.	0.5%	5 Mv.	6 Amp.	510
#2 200-500	0-200 Ma.	0.5%	5 Mv.	6 Amp.	
200-500	0-200 Ma.	0.5%	5 Mv.	6 Amp.	245
0-400	0-150 Ma.	0.5%	5 Mv.	10 Amp.	400
0-150	0-5 Ma.	*	5 Mv.		
100-400	0-150 Ma.	0.5%	5 Mv.	10 Amp.	141
100-400	0-150 Ma.	0.01%	1 Mv.	10 Amp.	2000
0-350	0-3 Amp.	0.5%	10 Mv.		730
0-350	0-2.25 Amp.	0.5%	10 Mv.		720
0-350	0-1.5 Amp.	0.5%	10 Mv.		710
0-350	0-750 Ma.	0.5%	10 Mv.		700
100-325	0-150 Ma.	0.5%	5 Mv.	10 Amp.	
0-150 Bias	0-5 Ma.	*	5 Mv.		131
0-300	0-150 Ma.	0.5%	5 Mv.	5 Amp.	315
0-150 Bias	0-5 Ma.	*	5 Mv.		
0-150	0-50 Ma.	0.5%	5 Mv.		150
3-30	0-30 Amp.	0.5%	0.1%		3030
1-13	0-10 Amp.	0.5%	10 Mv.		3200
0.3-3	0-100 Ma.	5 Mv.	1 Mv.		3100

DC POWER SUPPLY SPECIFICATIONS

REGULATION: As shown in table for both line fluctuations from 105-125 volts and load variation from minimum to maximum current.

*Regulation Bias Supplies: 10 millivolts for line 105-125 volts. 1/2% for load at 150 volts.

†All AC Voltages are unregulated.

All units are metered except Models 131, 315 and 3100.

All units are designed for relay rack mounting or bench use.

ADDITIONAL MODELS pictured on the following pages



KEPCO LABORATORIES

131-38 SANFORD AVENUE • FLUSHING 55, NEW YORK • FLUSHING 8-5700

KEPCO VOLTAGE REGULATED POWER SUPPLIES

MODEL 315

B SUPPLY: 0-300 volts, 150 ma.

REGULATION: ½% for both line, 105-125 volts, and load variations, 0-150 ma.

RIPPLE: 5 millivolts.

C SUPPLY: 0-150 volts, 5 ma.

REGULATION: 10 millivolts for line, 105-125 volts. ½% for load at 150 volts.

RIPPLE: 5 millivolts.

FILAMENT SUPPLY: 6.3 volts AC, 5 amp., CT.

Available with rack mounting.



MODEL 700

OUTPUT DC: 0-350 volts, 750 ma.

REGULATION: ½% for both line, 105-125 volts, and load variations, 0-750 ma.

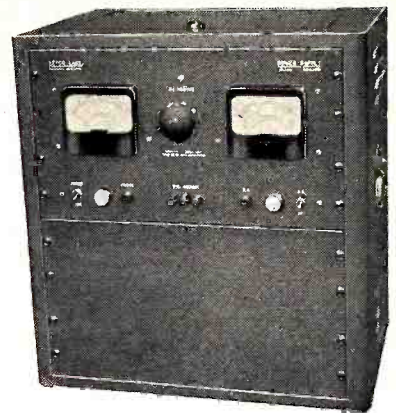
RIPPLE: 10 millivolts.

This unit is available delivering:

1.50 amp.—Model 710

2.25 amp.—Model 720

3.00 amp.—Model 730



MODEL 400

B SUPPLY: 0-400 volts, 150 ma.

REGULATION: ½% for both line, 105-125 volts, and load variations, 0-150 ma.

RIPPLE: 10 millivolts.

C SUPPLY: 0-150 volts, 5 ma.

REGULATION: 10 millivolts for line, 105-125 volts. ½% for load at 150 volts.

RIPPLE: 5 millivolts.

FILAMENT SUPPLY: 6.3 volts AC, 10 amp., CT.



MODEL 750

OUTPUT DC: 0-600 volts, 750 ma.

REGULATION: ½% for both line, 105-125 volts, and load variations, 0-750 ma.

RIPPLE: 10 millivolts.

This unit is available delivering:

1.50 amp.—Model 760

2.25 amp.—Model 770

3.00 amp.—Model 780



MODEL 500-R

OUTPUT DC: 0-600 volts, 300 ma.

REGULATION: ½% for both line, 105-125 volts, and load variations, 0-300 ma.

RIPPLE: 10 millivolts.

OUTPUT AC: 6.3 volts, 10 amp., CT.

MODEL 615

Model 615 is Model 500-R with a C Supply.

C SUPPLY: 0-150 volts, 5 ma.

REGULATION: 10 millivolts for line, 105-125 volts. ½% for load at 150 volts.

RIPPLE: 5 millivolts.



MODEL 800

Model 800 features TWO INDEPENDENT REGULATED POWER SUPPLIES.

OUTPUT DC FOR EACH SUPPLY: 0-600 volts, 200 ma. In parallel 400 ma.

REGULATION: ½% for both line, 105-125 volts, and load variations.

RIPPLE: 10 millivolts.

OUTPUT AC FOR EACH SUPPLY: 6.3 volts, 10 amp., CT.



MODEL 510

Model 510 features TWO COMPLETELY INDEPENDENT REGULATED POWER SUPPLIES.

OUTPUT DC FOR EACH SUPPLY: 200-500 volts, 200 ma.

REGULATION: ½% for both line, 105-125 volts, and load variations, 0-200 ma.

RIPPLE: 5 millivolts.

OUTPUT AC FOR EACH SUPPLY: 6.3 volts, 6 amp., CT.

The supplies may be connected for series, parallel, or bucking operation.



MODEL 815

B SUPPLY: 0-600 volts, 200 ma.

REGULATION: ½% for both line, 105-125 volts, and load variations, 0-200 ma.

RIPPLE: 5 millivolts.

C SUPPLY: 0-150 volts, 5 ma.

REGULATION: 10 millivolts for line, 105-125 volts. ½% for load at 150 volts.

RIPPLE: 5 millivolts.

FILAMENT SUPPLY: 6.3 volts AC, 10 amp., CT.



MODEL 1020

OUTPUT DC:
0-1000 volts, 50 ma.

REGULATION:
0.1% for both line, 105-125 volts, load variations, 0-50 ma. (range 100-1000 volts). 1/2% for both line, 105-125 volts, and load variations, 0-50 ma. (range 30-100 volts).

RIPPLE: 10 millivolts.
OUTPUT AC: 6.3 volts, 10 amp., CT.



MODEL 2000

OUTPUT DC:
100-400 volts, 150 ma.

REGULATION:
0.01% for both line, 105-125 volts, and load variations, 0-150 ma.

RIPPLE: 1 millivolt.

OUTPUT AC: 6.3 volts, 10 amp., CT.
The Super Regulator is available for many voltage and current ranges.



MODEL 1220

OUTPUT DC:
0-1200 volts, 20 ma.

REGULATION:
0.1% for both line, 105-125 volts, and load variations, 0-20 ma. (range 100-1200 volts). 1/2% for both line, 105-125 volts, and load variations, 0-20 ma. (range 30-100 volts).

RIPPLE: 10 millivolts.
OUTPUT AC: 6.3 volts, 10 amp., CT.

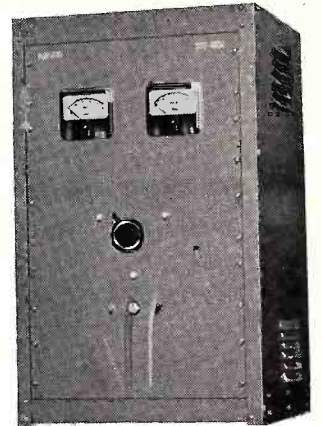


MODEL 3030

OUTPUT DC:
3-30 volts, 30 amp.

REGULATION:
1/2% for both line, 105-125 volts, and load variations, 0-30 amp.

RIPPLE:
Less than 0.1%

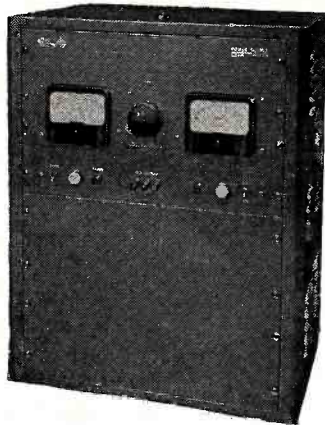


MODEL 1250

OUTPUT DC:
200-1000 volts, 500 ma.

REGULATION:
1/2% for line, 105-125 volts.
1/2% for load variations, 0-500 ma.

RIPPLE: 20 millivolts.



MODEL 3100

OUTPUT DC:
0.3-3 volts, 100 ma.

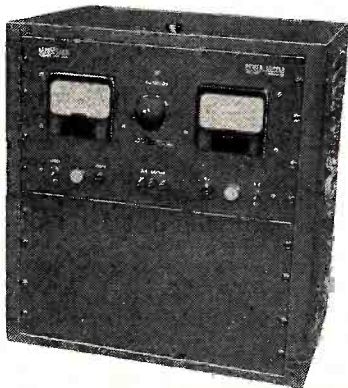
REGULATION:
5 millivolts for both line, 105-125 volts, and load variations, 0-100 ma.

RIPPLE:
1 millivolt.



MODEL 1350

OUTPUT DC:
0-1000 volts, 500 ma.
Regulation and ripple same as 1250.



MODEL 3200

OUTPUT DC:
1-13 volts, 10 amperes.

REGULATION:
1/2% for both line, 105-125 volts, and load variations, 0-10 amperes.

RIPPLE:
10 millivolts.



MODEL 1520

OUTPUT DC:
0-1500 volts, 200 ma.

REGULATION:
1/2% for both line, 105-125 volts, and load variations, 0-200 ma.

RIPPLE:
20 millivolts.



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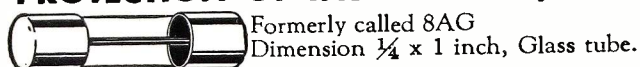
FOR NEW POWER SUPPLY CATALOG — WRITE DEPT. BG

BUSS Fuses

FUSETRON dual-element Fuses and Fuse Holders

for Protection of Radios, Instruments and Electronic Equipment

FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.



Formerly called 8AG
Dimension $\frac{1}{4} \times 1$ inch, Glass tube.

Provide high speed action necessary to protect instruments. Test specification—carry 100%, open at 200% in 5 seconds.

AGX are listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes
or 250 less	MJB	$\frac{1}{500}$, $\frac{1}{200}$, $\frac{1}{100}$, or $\frac{1}{32}$
"	MJW	$\frac{1}{16}$ or $\frac{1}{8}$
"	AGX	$\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$ or $\frac{1}{2}$
125 or less	AGX	$\frac{3}{4}$, 1, $1\frac{1}{2}$ or 2

The MJW fuses are special low resistance fuses.

BUSS FUSES — SFE STANDARD

Fuses of different amperages are of different lengths — to make it impossible to insert too large a size — thereby preventing over-fusing.



Glass tube — diameter $\frac{1}{4}$ inch. Length as per table below.

Voltage	Symbol & Amperes	Length Inches	Pounds per 100
32 or less	SFE 4	$\frac{5}{8}$	.70
"	SFE 6	$\frac{3}{4}$	.71
"	SFE 9	$\frac{7}{8}$	.72
"	SFE 14	$1\frac{1}{16}$	.77
"	SFE 20	$1\frac{1}{4}$	.83
"	SFE 30	$1\frac{1}{2}$	1.05

BUSS GLASS TUBE FUSES, $\frac{1}{4} \times 1\frac{1}{4}$ inch



AGC and MTH 4, 5 and 6



MTH 8

Voltage	Symbol	Amperes
250 or less	AGC	$\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2 or 3
"	MTH	4, 5, 6 or 8
32 or less	AGC	5, 6, $7\frac{1}{2}$, 10, 15, 25 or 30

20 ampere size is an SFE 20 fuse.

BUSS CERAMIC TUBE FUSES, $\frac{1}{4} \times 1\frac{1}{4}$ inch



Voltage Symbol Amperes
250 or less ABC 10, 12, 15 or 20

FUSETRON FUSES, $\frac{1}{4} \times 1\frac{1}{4}$ inch



Glass tube — Dual-Element type

A FUSE WITH A LONG TIME-LAG

These fuses avoid needless blows from starting currents or surges. They have a fuse link which operates only on very high overloads or short-circuits — they have a thermal cutout which functions on low overloads — the thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% in 1 hour.

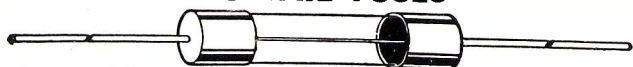
Approximate blowing time:	at 200% load	MDL 25 sec.	MDX 12 sec.
at 300%	"	8 "	3 "
at 500%	"	3 "	$\frac{1}{2}$ "

125 and 250 volt sizes listed as approved by Underwriters' Laboratories.

Shipping weight 0.9 lbs. per 100.

Voltage	Symbol	Amperes
250 or less	MDL	$\frac{1}{100}$, $\frac{1}{32}$, $\frac{1}{16}$, $\frac{1}{10}$, $1\frac{1}{100}$, $\frac{3}{10}$, $\frac{1}{10}$, $\frac{1}{2}$, $\frac{6}{10}$, $\frac{8}{10}$ or 1
125 or less	MDL	$1\frac{1}{4}$, $1\frac{1}{10}$, 2, $2\frac{1}{2}$, or $2\frac{3}{10}$
"	MDX	$3\frac{1}{10}$, 4, 5 or $6\frac{1}{4}$
32 or less	MDL	$3\frac{1}{10}$, 4, 5, $6\frac{1}{4}$, 8, 10, 15, 20, 25 or 30

PIG-TAIL FUSES



Pig tail fuses are available in both ordinary and FUSETRON dual-element fuse types.

Write for full information.

BUSS FUSE CLIPS & CLIP ASSEMBLIES for $\frac{1}{4}$ inch Fuses

(SFE 4, 6, 9, 14, 20 AGX, AGC, ABC, MDL, MJB, MJW, MTH fuses).



Spring bronze clips are made of Herculoy. This metal gives great gripping strength and retains spring under adverse conditions.

Beryllium copper clips combine low electrical resistance with great gripping strength. This means cooler operation of clips and fuse.

4548 Spring bronze clip, nickel plated.

4592 Beryllium copper clip, Silver plated.

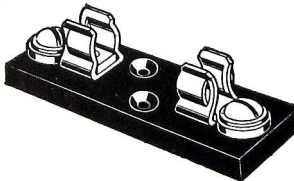


Assemblies consist of clip, terminal screw, brass terminal, and mounting screw.

4431 uses No. 4548 clip — described above.

4432 uses No. 4592 clip — described above.

BUSS FUSE BLOCKS



Blocks are made of bakelite with mounting holes. Clips are of spring bronze.

Fuse blocks are made in many sizes and types.

Tell us your requirements.

BUSS PANEL MOUNTED HOLDERS for $\frac{1}{4}$ inch Fuses



Holders are inserted through hole in panel and locked in place by nut on holder. Can be used on panels up to $\frac{5}{16}$ inch thick.

Bayonet type knob requires only quarter turn to remove fuse. No screw driver is needed.

Normal current carrying capacity: 15 amperes.

HJM for $\frac{1}{4} \times 1$ inch fuses (AGX, MJB, MJW, SFE 14)

HKP for $\frac{1}{4} \times 1\frac{1}{4}$ " " (ABC, AGC, SFE 20, MDL, MTH)

IN-THE-LINE HOLDERS for $\frac{1}{4}$ inch fuses

These holders are for mounting fuse in wire. Holders consist of body and bayonet type knob — two contacts ready to be staked on ends of wire — a pressure spring that is used under contact in base of holder.

Holders can also be mounted in panel up to $\frac{5}{16}$ inch thick by means of a No. 9969 Spring nut (not furnished). Flat spot on holder permits it to be locked against rotation.

Normal current carrying capacity: 15 amperes.

Shipping weight, holders: 4 lbs. per 100.

Symbol
HDI for $\frac{1}{4} \times 1$ inch fuses (AGX, MJB, MJW, SFE 14)
Takes No. 18 or smaller wires.

HDJ-A for $\frac{1}{4} \times 1\frac{1}{4}$ inch fuses (ABC, AGC, MDL, MTH, SFE 20)
Takes No. 18 or smaller wires.

HDJ-B for $\frac{1}{4} \times 1\frac{1}{4}$ inch fuses (as above)
Takes No. 14 or 16 wires.

No. 9969 Spring nut for panel mounting above holders.

Holder-and-Fuse Assemblies

Assembly consists of holder, fuse and 19 inch loop of No. 14 wire already staked and soldered to terminals.



Offer simplest way to install protection. Wire can be cut to give leads of desired length. A spring nut, furnished with holder, can be used to mount holder on panel up to $\frac{3}{32}$ inch thick.

HRJ Complete with SFE 20 fuse

HRI Complete with SFE 14 fuse

HRH Complete with SFE 9 fuse

GET FULL INFORMATION

Ask for bulletin SFB on Small Dimension
BUSS FUSES — FUSETRON FUSES — HOLDERS
BUSSMANN MFG. CO., University at Jefferson, St. Louis 7, Mo.
Division McGraw Electric Company




Oscillators, voltmeters, generators, analyzers, amplifiers—frequency counting, measuring and monitoring instruments, microwave coaxial or waveguide equipment—whatever your measuring needs, there's a precision-built *-hp-* instrument for the job. The *-hp-* line, world's most complete, includes over 200 tested and proved equipments for all types of measurement. Each gives you engineering economies of fast, accurate measurement, broad applicability, dependability, trouble-free service. Each has the traditional *-hp-* "family characteristics" of simple operation, minimum adjustment, independence of line voltage or tube changes, generous overload protection and highest quality design and construction. On these pages you'll find brief details of major *-hp-* instruments. For complete information, see your *-hp-* representative, or write factory direct.

HEWLETT-PACKARD COMPANY
2758 PAGE MILL ROAD • PALO ALTO, CALIFORNIA, U.S.A.

Complete Coverage in Electronic Test Instrumentation


Oscillators—Signal Generators .01 to 10,000,000 cps

-hp- 200 SERIES AUDIO OSCILLATORS



Now four basic *-hp-* oscillators have been redesigned into two compact, lightweight instruments offering wider frequency range, more operating simplicity, highest accuracy and stability. New Models 200AB and 200CD replace Models 200A through 200D, retain the time-tested RC circuits that insure constant output, low distortion; require no zero set. In addition to these general test instruments, *-hp-* continues to offer Model 202D for sub-audio, audio, supersonic and carrier tests; and Model 200I, a spread-scale oscillator for interpolation or where frequency must be known precisely.

-hp- 650A TEST OSCILLATOR



Highly stable, wide band (10 cps to 10 mc) multi-purpose test oscillator for audio, supersonic, video, and rf measurements. Output variable 30 μ v to 3 v. Frequency response flat ± 1 db. Output impedance 600 ohms, or 6 ohms with voltage divider. \$475.00.

Instrument	Primary Uses	Frequency Range	Output	Price
<i>-hp-</i> 200AB	Audio tests	20 cps to 40 kc	1 watt/24.5 v	\$120.00
<i>-hp-</i> 200CD	Audio, ultrasonic tests	5 cps to 600 kc	160 mw/20 v *	150.00
<i>-hp-</i> 200H	Carrier current, telephone tests	50 cps to 600 kc	10 mw/1 v	350.00
<i>-hp-</i> 200I	Interpolation and frequency measurements	6 cps to 6 kc	100 mw/10 v	225.00
<i>-hp-</i> 201B	High quality audio tests	20 cps to 20 kc	3 w/42.5 v	250.00
<i>-hp-</i> 202A	Low frequency measurements	.01 cps to 1 kc	20 mw/10 v	450.00
<i>-hp-</i> 202B	Low frequency measurements	1/2 cps to 50 kc	100 mw/10 v	350.00
<i>-hp-</i> 202D	Low frequency measurements	2 cps to 70 kc	100 mw/10 v	275.00
<i>-hp-</i> 204A	Portable, battery operated	2 cps to 20 kc	2.5 mw/5 v	175.00
<i>-hp-</i> 205A	High power audio tests	20 cps to 20 kc	5 watts	390.00
<i>-hp-</i> 205AG	High power tests, gain measurements	20 cps to 20 kc	5 watts	425.00
<i>-hp-</i> 205AH	High power supersonic tests	1 kc to 100 kc	5 watts	550.00
<i>-hp-</i> 206A	High quality, high accuracy audio tests	20 cps to 20 kc	+15 dbm	550.00
<i>-hp-</i> 230A	Carrier test oscillator	35 cps to 35 kc	+14 dbm/600 ohms	275.00
<i>-hp-</i> 233A	Carrier test oscillator	50 cps to 500 kc	3w/600 ohms	475.00
<i>-hp-</i> 234A	Carrier test oscillator	160 cps to 160 kc	+14 dbm/600 ohms	300.00
<i>-hp-</i> 650A	Wide range video tests	10 cps to 10 mc	15 mw/3 v	475.00

*Open circuit. Internal impedance 600 ohms.

Data subject to change without notice. Prices f.o.b. factory.



Precision-built -hp- instruments for every

-hp- Vacuum Tube Voltmeters - 2 to 700,000,000 cps

-hp- 410B VACUUM TUBE VOLTMETER



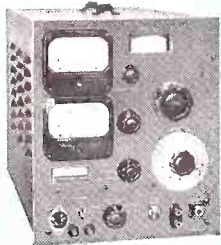
Wide range, flat response ± 1 db, 20 cps to 700 mc. Convenient, simple to use, occupies minimum bench space. Handy compartment for probe and leads. Diode probe places approximately $1.5 \mu\mu\text{fd}$ capacity across circuit under test. This, plus high shunt impedance (10 megohms at low frequencies) means circuits under test are not disturbed, and true voltage readings are assured. Also measures dc voltage to 1,000 volts and resistances to 500 megohms. \$245.00.

Instrument	Primary Uses	Frequency Range	Voltage Range	Input Impedance	Price
-hp- 400A	General purpose ac measurements	10 cps to 1 mc	.005 to 300 v 9 ranges	1 megohm 24 $\mu\mu\text{fd}$ shunt	\$185.00
-hp- 400B	Low frequency ac measurements	2 cps to 100 kc	.005 to 300 v 9 ranges	10 megohms 24 $\mu\mu\text{fd}$ shunt	195.00
-hp- 400C	Wide range ac measurements. High sensitivity	20 cps to 2 mc	.0001 to 300 v 12 ranges	10 megohms 15 $\mu\mu\text{fd}$ shunt	200.00
-hp- 404A	Portable, battery operated	2 cps to 50 kc	.0005 to 300 v 11 ranges	10 megohms 20 $\mu\mu\text{fd}$ shunt	185.00
-hp- 410B	Audio, rf, VHF measurements; dc voltages; resistances	20 cps to 700 mc	.1 to 300 v 7 ranges	10 megohms 1.5 $\mu\mu\text{fd}$ shunt	245.00

-hp- Voltmeter Accessories (not listed) include voltage dividers, connectors, shunts and multipliers to extend the useful range of your equipment.

-hp- Signal Generators - 10 to 10,800 mc

-hp- 612A SIGNAL GENERATOR



450 to 1,200 mc. Master oscillator-power amplifier generator for UHF-TV measurements including gain, selectivity, sensitivity, image rejection. Directly set and read; no charts, no interpolation. Low incidental fm, high-quality broad band video modulation to 5 mc. May be modulated internally or externally, amplitude modulated or pulse modulated. (Good rf pulses 0.2 μsec or longer.) \$1,200.00.

Instrument	Frequency Range	Characteristics	Price
-hp- 608A	10 to 500 mc	Output 0.1 μv to 1 v into 50 ohm load. Pulse or CW modulation. Direct calibration.	\$ 850.00
-hp- 610B	450 to 1,200 mc	Output 0.1 μv to 0.1 v into 50 ohm load. Pulse, CW or Square wave modulation. Direct calibration.	925.00
-hp- 612A	450 to 1,200 mc	Output 0.1 μv to 0.5 v into 50 ohm load. Pulse, CW or amplitude modulation to 5 mc. Direct calibration.	1,200.00
-hp- 614A	800 to 2,100 mc	Output 0.1 μv to 0.223 v into 50 ohm load. Pulse, CW or FM modulation. Direct calibration.	1,950.00
-hp- 616A	1,800 to 4,000 mc	Output 0.1 μv to 0.223 v into 50 ohm load. Pulse, CW or FM modulation. Direct calibration.	1,950.00
-hp- 618B	3,800 to 7,600 mc	Output 0.1 μv to 0.223 v into 50 ohm load. Pulse, CW, FM or Square wave modulation. Direct calibration.	2,250.00
-hp- 620A	7,000 to 10,800 mc	Output 0.1 μv to 0.071 v into 50 ohm load. Pulse, CW, FM or Square wave modulation. Direct calibration.	2,250.00
-hp- 623B	5,925 to 7,725 mc	Output 70 μv to 0.223 v into 50 ohm load. FM or Square wave modulation. Separate power meter and wave meter section.	1,750.00
-hp- 624B	8,500 to 10,000 mc	Output 3.0 μv to 0.223 v into 50 ohm load. Pulse, FM or Square wave modulation. Separate power meter and wave meter section.	2,250.00

-hp- Distortion, Wave Form Analyzers - 20 cps to 20 kc

-hp- 330B DISTORTION ANALYZER



Measures distortion as low as 0.1% at any frequency, 20 cps to 20 kc. Measures noise voltages as low as 100 μv . High sensitivity, high stability, broad applicability for broadcast, laboratory or production problems. Wide band 20 db gain input amplifier. Built-in vacuum tube voltmeter usable separately. \$395.00.

FM, AM-FM MODELS

-hp- 330C, for FM broadcasters, includes VU meter meeting F.C.C. requirements. -hp- 330D, for AM-FM broadcasters, includes AM detector to rectify AM carrier, plus VU meter employed in model 330C. Model 330C, \$425.00. Model 330D, \$440.00.

Instrument	Primary Uses	Frequency Range	Characteristics	Price
-hp- 300A	Wave form analyzer	30 cps to 16 kc	Variable selectivity; measuring range 1 mv to 500 v	\$625.00
-hp- 320A	Measures total distortion	400 cps and 5 kc	Requires external detector	75.00
-hp- 320B	Measures total distortion	50, 100, 400 cps, 1, 5 and 7.5 kc	Same as above	150.00
-hp- 330B	Measures total audio distortion	20 cps to 20 kc	Includes input amplifier, VTVM	395.00
-hp- 330C	For FM broadcast measurements	20 cps to 20 kc	Special VU meter to meet F.C.C. requirements	425.00
-hp- 330D	For AM-FM broadcast measurements	20 cps to 20 kc	AM detector and VU meter to meet F.C.C. requirements	440.00

SQUARE WAVE GENERATOR

-hp- 210A	Transient and frequency response	20 cps to 10 kc	Output 50 v peak-to-peak 1,000 ohm impedance	150.00
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Data subject to change without notice. Prices f.o.b. factory.

Instruments for Complete Coverage



Microwave test instruments for coaxial & waveguide systems

-hp- 430B MICROWAVE POWER METER



No computations! Provides instantaneous, automatic power readings *direct* in db or mw at all frequencies for which there are suitable bolometer mounts. For CW measurements, uses either

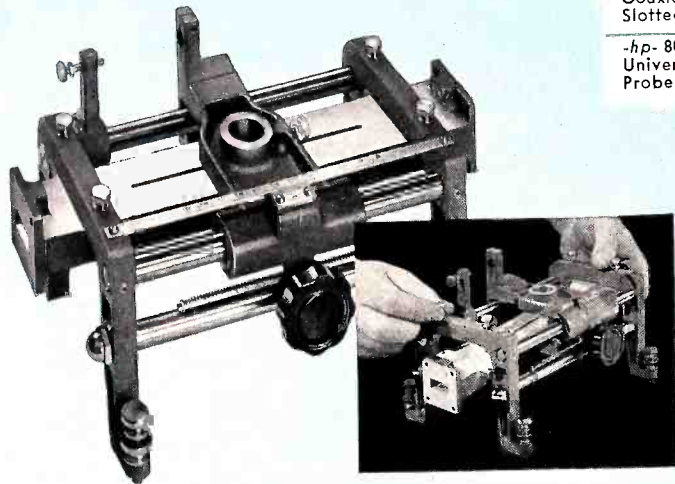
1/100 amp. fuse or Sperry 821 barretter. Also measures CW or pulsed power with negative coefficient thermistor. Operates with -hp- 475B or 476A Bolometer Mounts; also 485B Detector Mounts. \$250.00.



-hp- 803A VHF BRIDGE

Gives fast, direct readings of any impedance between 50 and 500 mc. Measures by sampling electric and magnetic fields in transmission line. Usable for comparative measurements 5 to

700 mc. Impedance range 2 to 2,000 ohms. Phase angle -90° to $+90^\circ$, at 52 mc and above. Also measures SWR, % reflected power, VHF system flatness. \$495.00.



-hp- 805A/B COAXIAL SLOTTED SECTION

Range 500 to 4,000 mc. High accuracy, high stability, negligible slope, minimum leakage. Exclusive parallel plane design, VSWR of basic section and connectors, 1.04. -hp- 805A, 50 ohms, Type N coax-connector. -hp- 805B, 46.3 ohms, for $\frac{7}{8}$ " rigid transmission lines. \$475.00.

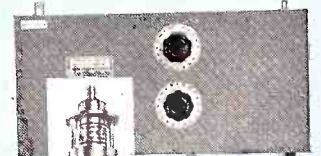
-hp- 806B Coaxial Slotted Section, 3,000 to 12,000 mc. For use with -hp- 809B carriage. Section and connector VSWR 1.04 to 8,000 mc. 50 ohm impedance, negligible slope. Type N connectors, \$200.00.



-hp- 417A VHF Detector for use with 803A Bridge; or general laboratory use. Super-regenerative receiver, 10 to 500 mc. 5 bands. Approx. $5 \mu\text{v}$ sensitivity over entire band. Direct reading frequency control, thoroughly shielded. \$200.00.



-hp- 415A Standing Wave Indicator for all waveguide or coaxial slotted sections. Gives direct readings in VSWR or db. Single frequency operation; 300 to 2,000 cps. Low noise level, $0.3 \mu\text{v}$ sensitivity, 60 db calib. attenuator. \$200.00.



475B



476A

-hp- 476A Universal Bolometer Mount measures rf power 10 to 1,000 mc. No tuning or adjustment. VSWR less than 1.15, 20 to 500 mc; 1.25, 10 to 1,000 mc. \$125.00. -hp- 475B Tunable Mount, continuous 1,000 to 4,000 mc. \$200.00.

Instrument	Primary Uses	Frequency Range	Characteristics	Price
-hp- 360A-D Low Pass Filters	Eliminates harmonic voltages from UHF systems	Cutoff frequencies A-700 mc. B-1,200 mc. C-2,200 mc. D-4,100 mc.	50 db rejection at 1.2 cutoff freq.	\$ 50.00
-hp- 415A Standing Wave Indicator	VSWR indicator or null indicator	300 to 2,000 cps. Normal freq. 1,000 cps	0 to 60 db attn. Max. sensitivity $0.3 \mu\text{v}$	200.00
-hp- 417A VHF Detector	VHF bridge detector (for -hp- 803A)	10 to 500 mc	Approx. $5 \mu\text{v}$ sensitivity	200.00
-hp- 430B Microwave Power Meter	Measurement of rf power	Depends on Bolometer mount	.01 to 10 mw $\pm 5\%$ accuracy	250.00
-hp- 475B Tunable Bolometer Mount	Measurement of rf power (with 430B)	1,000 to 4,000 mc	Matches 50-ohm line to 100 or 200 ohms	200.00
-hp- 476A Universal Bolometer Mount	Measurement of rf power (with 430B)	10 to 1,000 mc	No tuning required VSWR less than 1.25	125.00
-hp- 803A VHF Bridge	Measurement of VHF impedance, VSWR	50 to 500 mc	2 to 2,000 ohms impedance -90° to $+90^\circ$ phase angle	495.00
-hp- 805A Coaxial Slotted Section	Measurement of VSWR	500 to 4,000 mc	For Type N Connectors, flexible cables	475.00
-hp- 805B Coaxial Slotted Section	Same as above	Same as above	For rigid $\frac{7}{8}$ " RG44/U line	475.00
-hp- 806B Coaxial Slotted Section	Same as above (Mounts in 809B)	3,000 to 12,000 mc	For Type N Connectors, flexible cables	200.00
-hp- 809B Universal Probe Carriage	Supports 806B section, also G, J, H, X and P 810 Waveguide sections		Accepts 442B and 444A probes	160.00

-hp- 809B UNIVERSAL PROBE CARRIAGE -hp- 810 WAVEGUIDE SLOTTED SECTIONS

Convenient, all-purpose -hp- 809B carriage operates with six different -hp- slotted sections, waveguide and coaxial. Mounts sections covering frequencies 3,000 to 18,000 mc—sections interchange in 30 seconds! Precision-built carriage calibrated in mm to 0.1 mm; dial gauge may be mounted. Operates with -hp- 442B Broad Band Probe and -hp- 440A Coaxial Detector in combination; or with -hp- 444A Untuned Probe. (See preceding page for probe details.) -hp- 809B, \$160.00.

-hp- 810A/B Slotted Sections. -hp- 810B, for mounting in 809B carriage, is a flanged waveguide section with accurately machined slot tapered at ends to minimize reflection. Available in 5 waveguide bands, 3.95 thru 18.0 kmc. -hp- 810A, complete slotted section assembly including probe carriage. Available for 2.6 to 3.95 kmc band only. (See table on preceding page for data, prices.)

Data subject to change without notice. Prices f.o.b. factory.



ELECTRONIC TEST INSTRUMENTS

-hp- POWER SUPPLIES

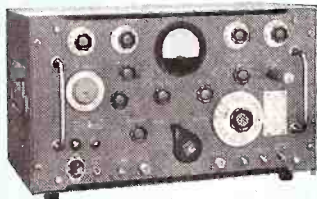


-hp- 715A (illustrated) is a versatile source of regulated beam and reflector voltage for operating most test bench klystron tubes. Beam voltage 250 to 400 v; reflector voltage 0 to 900 v; 6.3 v filament. Internal, 1,000 cps square wave modulation, also 60 cps fm modulation, both on reflector voltage. \$300.00.

-hp- 710A—Highly stable regulated dc supply, output variable 180 to 360 v at 75 ma, 6.3 v filament. Either terminal may be grounded. Total hum and noise less than 5 mv. \$85.00.

-hp- 712A. Stabilized, variable power supply providing 0 to 500 v at 200 ma and 1/2% regulation. Also variable bias voltages, 0 to 150 v at 5 ma, and 6.3 v filament at 10 amps. Main supply completely metered. Either terminal may be grounded. Hum less than 8 mv. For laboratory, production or general use. \$250.00.

-hp- 624A X-BAND TEST SET



High level, direct reading, portable test set simplifies lab or field work at frequencies 8,500 to 10,000 mc. Rf output .223 v max. High stability attenuator reduces level by 100 db. May be pulsed or fm modulated. Separate section

measures external rf power or external frequency. Ideal one-piece unit for measuring sensitivity and selectivity, tuning and power level of radar, gunfire and beacon systems. \$2,250.00.

-hp- 623B SHF Test Set, like 624A but operates over frequencies determined by klystron installed. Three klystrons available (each with 600 mc band width) for frequencies between 5,925 and 7,725 mc. Fm modulated. Includes 1,000 cps square wave modulator. \$1,650.00 (with one Klystron).

-hp- AMPLIFIERS



Complete instrumentation for distortion-free fast pulse measurement. **-hp- 460A Wide Band Amplifiers**, in cascade with **-hp- 460B Fast-Pulse Amplifiers**

offer up to 90 db gain, 125 v open circuit output. This permits full deflection of 5XP CRT, or 2-inch deflection of 5CP tubes. Rise time 0.0026 μ sec; can amplify milli-microsecond pulses; gives over 100 mc bandwidth to your standard oscilloscope. 460A, \$185.00; 460B, \$225.00. Connecting cables, plugs, accessories—prices on request.

-hp- 450A Amplifier—general purpose instrument, 20 db or 40 db gain, for use wherever wide frequency range and high stability are needed. 10 cps to 1 mc. Negligible phase shift, no spurious responses. \$140.00.

-hp- 451A Bridging Amplifier. For connecting to high impedance circuits without disturbing circuits or affecting operating conditions. 83 megohms impedance probe readily connects to any point in circuit. Amplifier repeats this voltage accurately without distortion, for operation of VTVM, distortion analyzer, oscilloscope, etc. Frequency 20 cps to 1 mc. \$100.00.

-hp- 212A PULSE GENERATOR



Provides continuously variable, high power "fast pulses" of superior wave form. Combines broad general usefulness with 0.02 μ sec rise and decay time to meet requirements of radar, TV and nuclear work. Pulse length variable 0.07 to 10 μ sec. minimum overshoot; 50 watt peak

power (50 v to 50 ohms load). Low impedance means accurate pulses can be delivered at a distance from the instrument. Repetition rate variable 50 to 5,000 pps; controlled internally or externally. Synchronizing pulses available in advance of, or following, output pulse. \$550.00.

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-hp- has selected the best independent organizations in America to give you personal help with measuring problems. Electronics specialists—men trained by Hewlett-Packard—save you time by helping select exact **-hp-** instrumentation you need. These men are located in major business centers—as near as your telephone. Call them when you need personal help—in your plant—today!

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SHALLCROSS

AKRA-OHM PRECISION RESISTORS



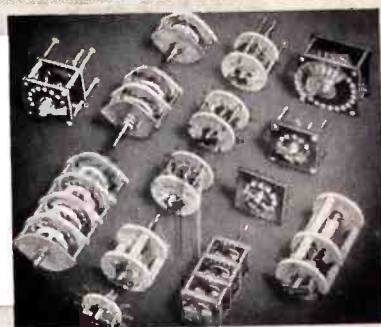
Not only are Shallcross Akra-Ohm precision wire-wound resistors made to extremely close tolerances; equally important, they are physically protected to maintain their accuracy under difficult operating conditions. Types, shapes, sizes,

and mounting styles for JAN, MIL, and other exacting needs. Guaranteed tolerances to 0.01% and stabilities as low as 0.003% where required. Matched pairs and sets available. Write for Shallcross Resistor Bulletin R-3C.

MULTI-POSITION SELECTOR SWITCHES

Shallcross regularly manufactures a wide variety of single or multi-deck selector switches having up to 180 positions and designed for dependable performance up to 250 volts 10 amperes, or 2500 volts 1 ampere A.C. Contact resistance ranges

from as low as 0.0005 ohm to a maximum of 0.005 ohm depending upon the size and material of the contacts. Outline your requirements on Specification Sheet No. 6 for recommendation. Write for Data Bulletin L-13.



PRECISION AUDIO ATTENUATORS

Improved materials and production techniques and careful quality control for Shallcross Attenuators have resulted in a line that sets higher standards of attenuation performance for practically every audio and communications use. Included are single and dual potentiometers, variable im-

pedance matching networks, V. U. meter multipliers, cueing attenuators, fixed pads, pre-emphasis and de-emphasis networks, attenuation boxes, ladder and balanced ladder controls, bridged T, straight T, bridged H, and straight H attenuators. Write for Attenuator Bulletin 4-A.

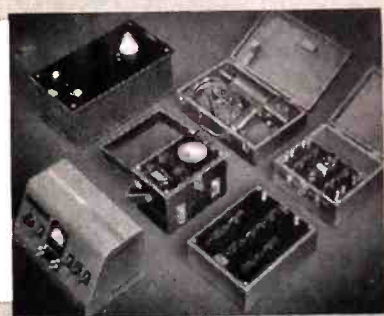


PRECISE MEASURING INSTRUMENTS

As long-time specialists in standard and special electrical measuring instruments, Shallcross welcomes your inquiry for any desired types. Standard instruments include:

Resistance standards • Decade Potentiometers • Decade Resistance Boxes • Wheatstone Bridges • Combined Kelvin-Wheatstone Bridges • Wheatstone-Megohm Bridges • Wheatstone-Limit Bridges • Percent-Limit Bridges • Capacitor Analyzers • Decibel Meters • Tone Generators • Telephone Test Equipment • Low-Resistance Test Sets • High-Voltage Test and Measuring Equipment.

Write for Shallcross Bulletin DC



TUBULAR MULTIPLIER RESISTORS

Shallcross Types MFA and MFB are special resistance elements hermetically sealed in ceramic tubes with ferrule terminals. Designed to JAN-R-29 specifications, they are available with ratings from 1 to 6 watts and for potentials from 1 to 6 KV.

HIGH-RANGE KILOVOLT METER MULTIPLIERS

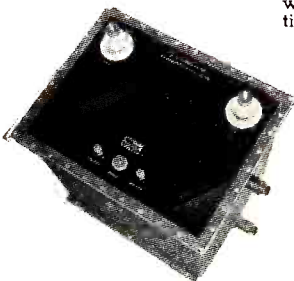
Whether for direct high-voltage measurements or for use as standards, Shallcross KV meter multipliers combine close accuracy with safety and dependability. Various types are available for voltages up to 200,000 volts or higher if required. Write for Bulletin L-7.

HERMETICALLY-SEALED NETWORKS

Resistance, capacitance, bridge and inductance types available to meet critical electrical specifications and space requirements. Outline details of your requirements for recommendation by Shallcross Engineers.

CUSTOM-BUILT SPECIALTIES AND ENGINEERING SERVICE

Sealed networks, high voltage measuring equipment, special test sets, thermally controlled networks, precise decades and networks for computer devices, high resistance standards, and critical coil assemblies are designed by Shallcross Engineers and built to meet your requirements. Forward your specifications for further information.



SHALLCROSS MANUFACTURING CO., 10 Jackson Ave., Collingdale, Pa.

Representatives in principal U. S. Cities; Toronto and Vancouver, Canada.

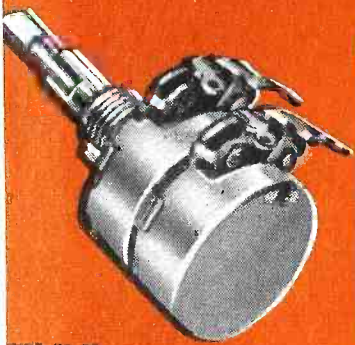
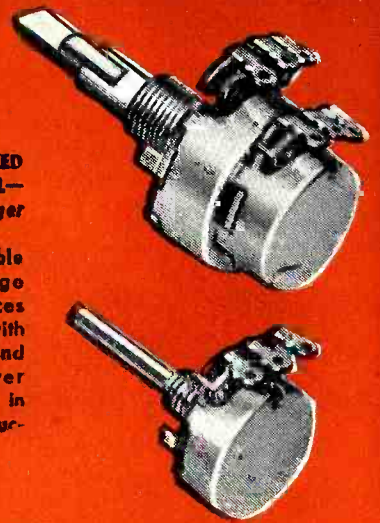
COMPLETE CIVILIAN LINE

Exceptionally good delivery cycle on civilian orders due to tremendous mass production facilities.

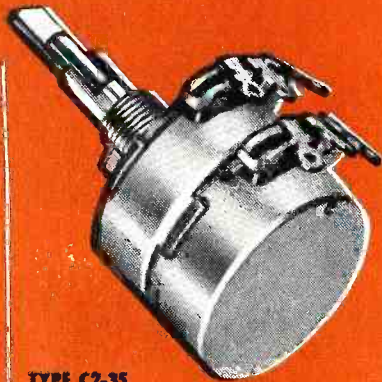
TYPE C45-70

NEW HIGH QUALITY MINIATURIZED "DIME-SIZE" CIVILIAN CONTROL—Performance Fully Equals Larger Types.

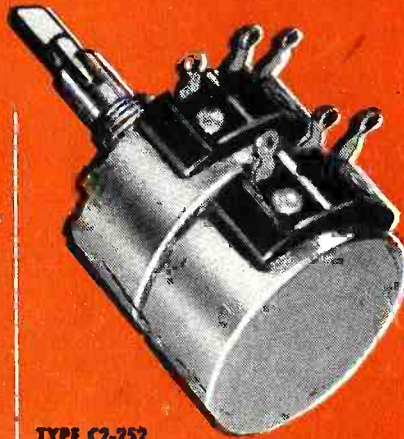
TYPE 70, 3/4" diameter variable composition resistor. Wattage rating: .3 watt for resistances through 10,000 ohms, .2 watt with 350 volts maximum across end terminals for resistances over 10,000 ohms. Also available in concentric shaft tandem construction C45-70 as shown above.



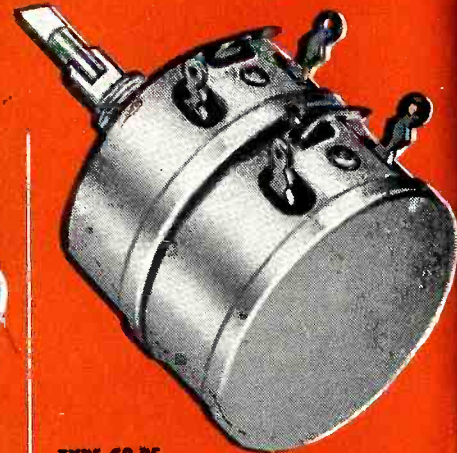
TYPE C2-45



TYPE C2-35



TYPE C2-252



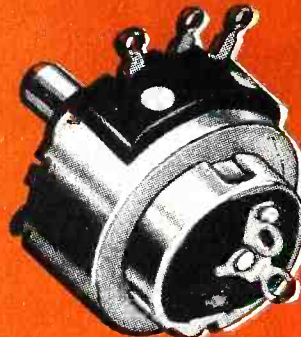
TYPE C2-25



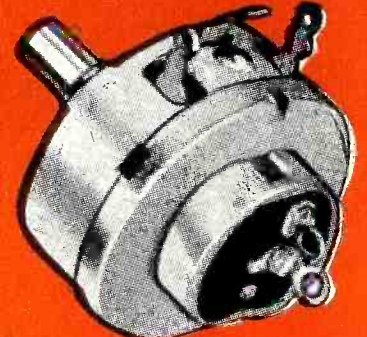
TYPE GC-45, 15/16" diameter variable composition resistor. Wattage rating: 1/2 watt for resistances through 10,000 ohms, 1/3 watt for resistances over 10,000 ohms through 100,000 ohms, 1/4 watt with 500 volts maximum across end terminals for resistances over 100,000 ohms. Available with or without illustrated attached switch and in concentric shaft tandem construction C2-45 as shown above.



TYPE GC-35, 1 1/8" diameter variable composition resistor. Wattage rating: 3/4 watt for resistances through 10,000 ohms, 2/3 watt for resistances over 10,000 ohms through 25,000 ohms, 1/2 watt with 500 volts maximum across end terminals for resistances over 25,000 ohms. Available with or without illustrated attached switch and in concentric shaft tandem construction C2-35 as shown above.

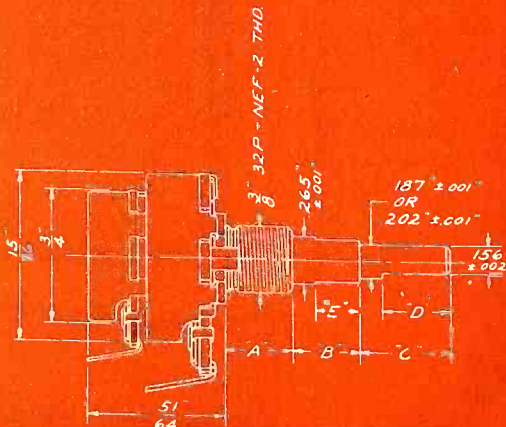


TYPE GC-252, 2 watt, 1 17/64" diameter variable wirewound resistor. Available with or without illustrated attached switch and in concentric shaft tandem construction C2-252 as shown above.



TYPE GC-25, 4 watt, 1 17/32" diameter variable wirewound resistor. Available with or without illustrated attached switch and in concentric shaft tandem construction C2-25 as shown above.

Typical concentric shaft tandem with panel and rear sections operating separately from concentric shafts (TYPE C45-70 ILLUSTRATED). Similar construction available for all military resistors.



TYPE C45-70

ENLARGED SHAFT END VIEW

REPRESENTATIVES

Henry E. Sanders
McClatchy Bldg.
69th & Market St.
Upper Darby, Penna.
Phone: Flanders 2-4420

W. S. Harmon Company
1638 So. La Cienega Blvd.
Los Angeles 35, California
Phone: Bradshaw 2-3321

John A. Green Company
6815 Oriole Drive
Dallas 9, Texas

IN CANADA

C. C. Meredith & Co.
Streetsville, Ontario

SOUTH AMERICA

Jose Luis Pontet
Buenos Aires, Argentina
Montevideo, Uruguay
Rio de Janeiro, Brazil
Sao Paulo, Brazil

OTHER EXPORT

Sylvan Ginsbury
8 West 40th Street
New York 18, N. Y.

Specialist



COMPLETE MILITARY LINE

Immediate delivery from stock on 189
types including JAN-R-94 and JAN-R-19
types of variable resistors.

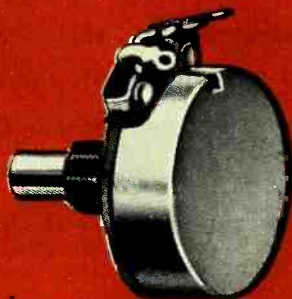
NEW 38-PAGE ILLUSTRATED CATALOG—

Describes Electrical and Mechanical characteristics, Special Features and Constructions of a complete line of variable resistors for military and civilian use. Includes dimensional drawings of each resistor. Write today for your copy.

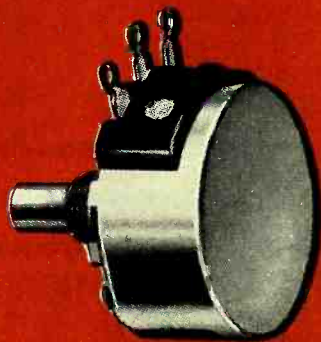
TYPE 45, (JAN-R-94, Type RV2)
1/4 watt, 15/16" diameter variable composition resistor. Also available with other special military features not covered by JAN-R-94 including concentric shaft tandem construction. Attached switch can be supplied.



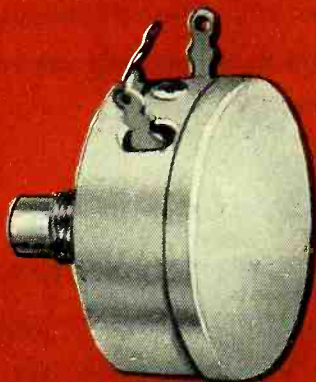
TYPE 35, (JAN-R-94, Type RV3)
1/2 watt, 1 1/8" diameter variable composition resistor. Also available with other special military features not covered by JAN-R-94 including concentric shaft tandem construction. Attached switch can be supplied.



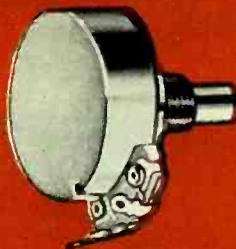
TYPE 252, (JAN-R-19, Type RA20)
2 watt, 1 17/64" diameter variable wirewound resistor. Also available with other special military features not covered by JAN-R-19 including concentric shaft tandem construction. Attached switch can be supplied.



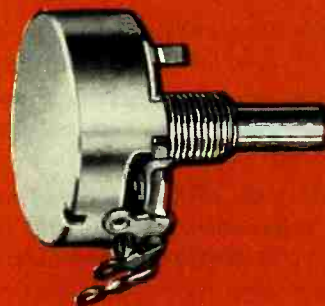
TYPE 25, (JAN-R-19, Type RA30)
(May also be used as Type RA25)
4 watt, 1 17/32" diameter variable wirewound resistor. Also available with other special military features not covered by JAN-R-19 including concentric shaft tandem construction. Attached switch can be supplied.



TYPE 65, (Miniaturized)
1/2 watt 70°C, 3/4" diameter miniaturized variable composition resistor.



TYPE 90
1 watt 70°C, 15/16" diameter variable composition resistor. Attached switch can be supplied. Also available in concentric shaft tandem construction.



TYPE 95, (JAN-R-94, Type RV4)
2 watt 70°C, 1 1/8" diameter variable composition resistor. Also available with other special military features not covered by JAN-R-94 including concentric shaft tandem construction. Attached switch can be supplied.

UNPRECEDENTED PERFORMANCE CHARACTERISTICS

Specially designed for military communications equipment subject to extreme temperature and humidity ranges. -55°C to +150°C...aridity to saturation.



CHICAGO TELEPHONE SUPPLY
Corporation

Precision Mass Production of Variable Resistors

ELKHART - INDIANA

Why it pays to make Rome your source of special electronic cables



10 conductor shielded, Neoprene-jacketed electronic cable



Special 8 conductor, shielded, mobile transmitter cable



2 conductor, polyethylene-insulated, shielded,
Neoprene-jacketed microphone cable



8 conductor, Rome Synthinol®-jacketed, TV camera cable



Special Rome Synthinol 901®
hook-up wire—8 mil wall with nylon sheath



Special 136 conductor, Rome Synthinol-insulated, electronic cable

When you have an electronic wiring problem it pays to go to a specialist, such as Rome Cable. Wires and cables made by Rome, first, are designed by engineers with training and experience in electronic applications. Further, Rome Cable has the manufacturing knowledge and facilities to produce unusual constructions . . . with quality controlled step by step. By standardizing on Rome wires and cables you assure dependable performance for your product and add obvious quality . . . with a component engineered to your requirement.

Rome manufactures a wide range of hook-up wires, intercommunication cables, coaxial cables, electronic computer cables, R. F. transmission line, television camera cables as well as other special constructions.

COMMERCIAL TYPE HOOK-UP WIRES

Rome offers commercial type hook-up wires with three standard insulations.

Rome Hi-temp—a rubber insulation with exceptionally high resistance to heat and moisture. Underwriters' approved for 75° C.

Rome Synthinol—a polyvinyl chloride thermoplastic compound, highly resistant to acids, oils, alkalis, moisture and flame. Underwriters' approved for 80° C.

Rome Synthinol 901—offers all the advantages of Synthinol plus higher resistance to heat deformation, shrinkage and cracking, also improved solderability. Underwriters' approved for 105° C.

MILITARY HOOK-UP WIRES

Rome manufactures military type SRIR, SRHV and WL, complying with Joint Army-Navy Specification JAN-C-76, as well as shipboard types SRI and SRIB conforming to Specification MIL-C-915 A (SHIPS). Insulated with Rome Synthinol, these wires are made in a complete range of specification sizes.

ROME CABLE CORPORATION, Dept. EB-6, Rome, N. Y.

Please send me information on Electronic Wiring

Name.....

Company.....

Address.....

City..... Zone..... State.....

It Costs Less to Buy the Best



Westinghouse

EQUIPMENT FOR THE ELECTRONICS INDUSTRY



Surge Comparison Testers • FG Audio Amplifiers
High Voltage Rectifiers • Portable Balancers
Portable Vibrograph • Micarta • Transformer Cores
Transformers • Transistors • Magnetic Amplifiers
Instruments • Selenium Rectifiers • Capacitors
Magnetic Metals and Alloys • Pushbuttons • Relays
Indicating Lamps • Switches • Electronic Tubes

SURGE COMPARISON TESTERS



MOBILE



PORTABLE

This Westinghouse surge comparison tester simultaneously tests turn-to-turn, phase-to-phase and coil-to-ground insulation; one equipment for most testing needs. With every test set-up, high frequency and high potential qualitative tests of resistance, impedance, and turn balance are made—results are obtained by a single scope observation. High turn-to-turn voltages are applied without excessive winding-to-ground stress.

Non-destructive testing is assured on even fractional h-p motors; however, destructive fault location is possible in many cases. Surge Potential: 10 kv Peak; Negative to Ground.

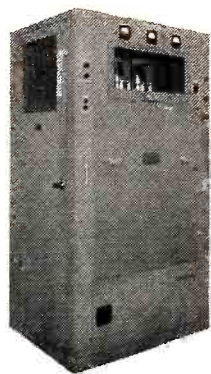
Power Input: 115-125 volts, 60 cycle.

7 amperes in Portable Model

16 amperes in Mobile Model

Request Descriptive Bulletin 85-960 for complete information.

FG AUDIO AMPLIFIER



The Type FG 5/10 KW audio amplifier consists of a push-pull power amplifier stage driven by a high fidelity driver amplifier. The power stage contains either two or four triodes (WL-5736) depending upon whether 5- or 10-kilowatts output is desired. Supply for the final stage uses selenium rectifiers. Power supply may be 3 phase, 50 or 60 cycle, 220, 230, 240 or 440, 460, 480 volts. Output 5 or 10 KW into a resistive load over a frequency range of 30-10,000 cps. See D.B. 85-950 for full information.

OPERATIONAL CHARACTERISTICS
Response: Uniform ± 1.5 db, 30-10,000 cps with resistance load.

Distortion: RMS harmonic distortion 5% or less, 50-10,000 cps.

Hum and Noise Level: 45 db or more below full output.

Audio Input Level: 10 milliwatts maximum

Input Impedance: 150 or 600 ohms.

Output Voltages as specified: Arranged for 6 voltages in arithmetical progression.

For example: 120-240-360-480-600-720 volts.

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EQUIPMENT FOR ELECTRONICS

PORTABLE BALANCERS



TYPE HQ
PORTABLE BALANCER

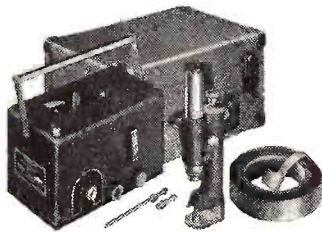
Static and dynamic unbalance are usually present in rotating parts after fabrication. Undesirable vibration and noise inherent in mass produced rotors can be eliminated by balancing dynamically with production type balancing machine tools. However, where conditions are such that balancing a rotor in its own bearings is necessary, a portable balancer is indicated.

In the Type HQ portable balancer, relatively simple, accurate and reliable means are provided, by a wattmeter and sine-wave alternator, for determining the amount of unbalance, and the angular location and magnitude of the correction weights.

The balancer consists of an indicating

wattmeter, with necessary interconnection, switching and control devices, assembled in a carrying case; one or more velocity type pickups; and either a sine-wave alternator for hand held models or a keyed type sine-wave generator for mounted models. The alternator or generator, and pickup assemblies are supplied in a separate carrying case. Seismic mountings for pickups are also available. The apparatus may be used normally in a speed range of 600 to 6000 r.p.m. The range may be extended downwardly to 200 r.p.m. by means of an auxiliary low speed seismic mounting. For applications above 600 r.p.m., high speed seismic mountings are available. Request Descriptive Bulletin 85-920 for complete details.

PORTABLE VIBROGRAPH



TYPE LE
PORTABLE VIBROGRAPH

The S#867928-A Type LE Portable Vibrograph is an instrument for making a permanent film record of vibrations in machinery or other rotating bodies. It produces a permanent record of both frequency and amplitude of vibration, on an acetate film. Arranged to be either hand held or for seismic operation. A 40X microscope with a calibrated field is provided for reading the vibration trace on the film. Trace may be projected in enlarged form on screen with Fox Film Micro-Projector. (Not supplied). Low frequency vibration recording of large structures is possible in combination with Barry Seismic Pendulum

obtainable from The Barry Corp., 700 Pleasant St., Watertown, Mass.

Frequency Range: 600- 15,000 RPM (10 to 250 cps)

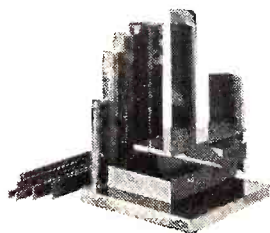
Amplitude Range: .0001- .050 in. at low frequencies; .0001- .0025 in. at high frequencies

Sensitivity: Amplitudes as low as .0001 in. can be read

Timer Frequency: Approximately 1800 cycles per minute.

Request Descriptive Bulletin 85-911 for complete information.

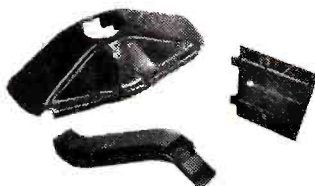
MICARTA[®]



LAMINATED SHEETS AND SHAPES



MOLDED PIECES



MICARTA 444

MICARTA SHEETS AND SHAPES

Twenty grades of sheets, most of which are available in black or tan. Fillers include paper, cotton, asbestos and glass. The most commonly used by communication engineers is Micarta tan (254) and black (464), both of which are paper base plastic. Either color supplied in 36" x 36" sheets, 1/32" to 2" thick.

MOLDED MICARTA

For large production quantities of simple or complicated shapes. Material placed in the mold may be in one of four forms: (a) wood flour and plastic, (b) impregnated cloth or paper in laminated form, (c) impregnated cloth or paper chopped

MICARTA "444"

This form of Micarta offers a practical and economical means of obtaining molded forms or shapes with low-cost equipment and dies. Examples of the shapes are shown at left. A tan or green product, processed in flat sheets of vari-

Micarta 259 is made of melamine resin in a base of glass cloth. It is white, fire-resistant and very strong. Standard Micarta shapes include angles, channels, zees, rods and tubes. All are produced in six or more grades, in various dimensions.

into small pieces, or (d) a combination thereof. Grades using sheets and chopped pieces make the strongest parts; those containing wood flour are useful for intricate shapes.

ous thicknesses, from cotton cloth impregnated with a phenolic resin binder. Micarta "444" is a practical material for post forming many parts ordinarily made of drawn sheet steel.

For complete details on Micarta, request Booklet B-3184-B.

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TRANSFORMER CORES

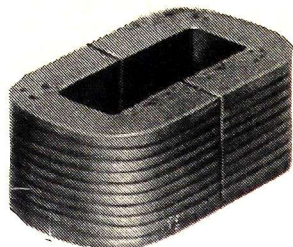
Hipersil® Type C Cores



1 MIL



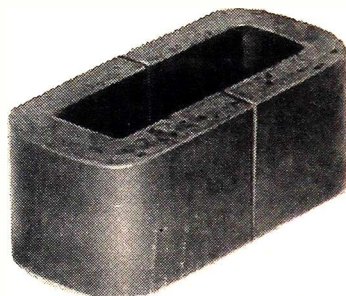
2 MIL



4 MIL



5 MIL



12 MIL

The Hipersil Type C core was originally developed by Westinghouse to use oriented silicon steel to full advantage. Since its introduction 14 years ago continual developments have been made in the product to insure better performance. Along with the great improve-

1 MIL—For pulse transformer applications $\frac{1}{4}\mu$ sec. and below and for IF transformers these cores give the ad-

2 MIL—For pulse transformer applications down to $\frac{1}{4}\mu$ sec. these cores

4 MIL—For 100 cycle transformers where the cores are worked at high inductions (these cores are tested at 17.6 Kg. prior to shipment) these

5 MIL—For 400 cycle applications, these cores have been standard for

12 MIL—For 60 cycle applications, 12 mil cores (formerly called 29 gauge) furnish the best transformer core for 60 cycle shipboard and land-based military applications as well as industrial. These cores effect economy of assembly as well as the advantages of small size and weight.

ments in the magnetic materials themselves toward lower core loss and higher permeability, have been improvements in construction such as a lower loss etched butt joint and the more recent grooved core construction for greater stability in transformer operation.

vantage of low-cost assembly as well as high performance. 1 Mil cores . . . Available in same size as 2 Mil.

have been standard for the past 9 years.

cores with extra low exciting current, give the smallest possible 400 cycle transformers.

airborne electronic applications for the past 8 years.

Further Descriptive Information is available under the following:

1 Mil—D.B. 44-035—Sec. 3

2 Mil—D.B. 44-035—Sec. 3

4 Mil—D.B. 44-035—Pgs. 25 & 26

5 Mil—D.B. 44-035—Sec. 2

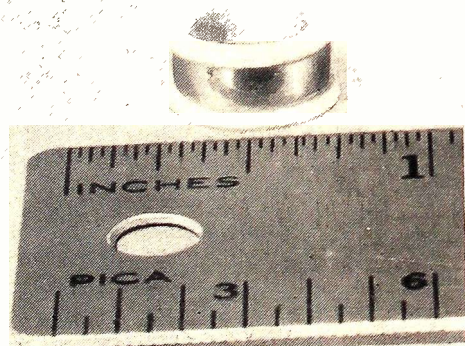
12 Mil—D.B. 44-035—Sec. 1

Hiperthin Cores

HIPERTHIN CORES—Toroidal cores of ultra-thin high permeability magnetic material wound over ceramic spools for computer static storage elements and high frequency pulse applications.

These cores are available in various types of materials such as HIPER-

SIL® (3% silicon iron), HIPER-NIK® (50% iron-nickel), ORTHO-NIK (50% iron-nickel, rectangular hysteresis loop) and 4-79 Permalloy, all in thicknesses of 1 mil, $\frac{1}{2}$ mil, $\frac{1}{4}$ mil and $\frac{1}{8}$ mil. Standard spool sizes are shown and number of turns of magnetic material can be varied to suit application.



I.D. SPOOL	I.D. CORE	O.D. SPOOL	STRIP WIDTH
$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{1}{8}$
$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{8}$
$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{8}$
$\frac{1}{2}$	$\frac{9}{16}$	$\frac{21}{32}$	$\frac{1}{8}$
$\frac{3}{4}$	$\frac{13}{16}$	$\frac{29}{32}$	$\frac{1}{8}$
1	$1\frac{1}{4}$	$1\frac{1}{2}$	$\frac{1}{4}$



EQUIPMENT FOR ELECTRONICS

PULSE TRANSFORMERS hermetically sealed

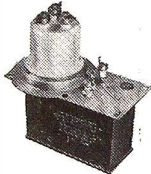
Oil-filled output pulse transformers for peak voltage ratings 7 Kv and higher, and pulse widths from 1/4 to 10 micro-seconds are available in standard ratings and are also designed to customer specifications.



4P43



4P54



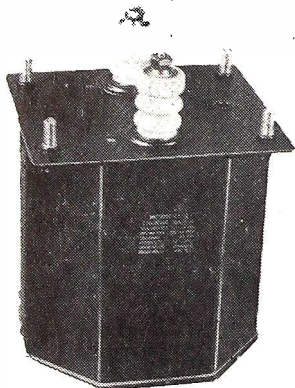
4P37

CATALOG NUMBER	PULSE WIDTH MICROSECONDS	REPETITION RATE PULSES PER SECOND	PULSE KV INPUT/OUTPUT	IMPEDANCE INPUT/OUTPUT	BIFILAR AMPS HEATER CURRENT
4P59	0.5	2000	2.5/12	50/1100	1.0
4P37	0.5-5	200	3.3/15	50/1000	.25*
4P100	0.25	4000	3.5/14	50/1000	1.0
4P43	1-2.5	2000-400	5.5/22	50/800	2.5
4P148	.5	2500	3.5/28.5	15/960	1.25
4P147	.5	2500	4.75/28.5	25/960	1.25
4P86	.5	2500	6.56/28.5	50/960	1.25
4P79	1.0	400	5.3/26.5	25/625	3.0
8P3	1.8	400	6.86/35	33/848	1.72*
4P54	1-4	1200-300	6.26/30	25/650	2.0
4P71	1-4	600-150	6.1/31	25/625	2.4

*Design includes a filament transformer mounted in the H. V. bushing to transform 115 volt supply and Bifilar amps to magnetron heater requirements.

Low Power: Designed for use in low power, low voltage pulse circuits. Four general types are: (1) Blocking oscillator or regenerative drive, (2) Pulse trigger or current transformer, (3) Low power pulse output transformer, and (4) Coupling transformers. See Catalog Section 44-250.

CHARGING CHOKES hermetically sealed



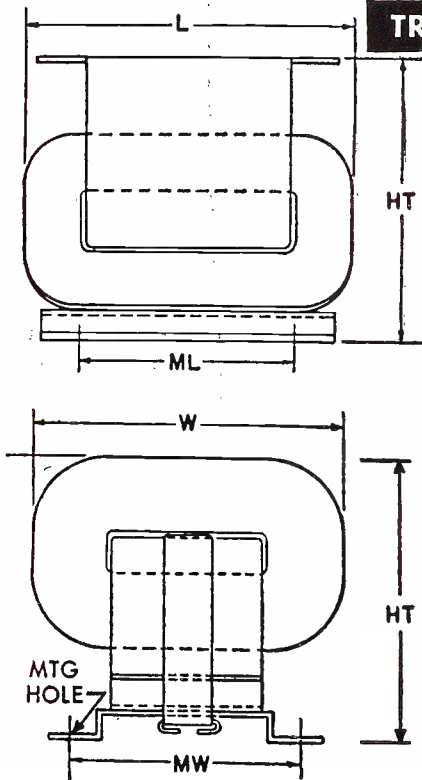
Used between D-C power supply and Pulse-forming network in high power pulse modulators. Types, based on circuit operation, are resonant, hold-off diode, and linear.

Catalog Number	DC Supply KV	Network KV	Inductance Henries	Average Current MA	Repetition Rate Pulses Per Second
4Y22	5.5	11	27	122	400
4Y10	9	18	22	180	600
8Y3	9	18	10	315	340
4Y13	12.5	25	18	650	300/1200

TRANSFORMERS Fosterite® treated

filament • plate • power • filter choke

Standard transformer sizes, single phase, designed for operation at 380-420 cycles, in 85°C ambient, with 50°C rise and up to 3000 volts rms dielectric test.



Size No.*	OVERALL DIMENSIONS			MOUNTING DIMENSIONS			Total Wt (Lbs)
	L	W	Height	ML	MW	Hole	
3011	1 1/2	1 3/32	1 1/16	—	1 1/8	.141	1/4
3021	1 5/8	1 5/8	1 3/16	—	1 1/8	.141	5/16
3032	2	1 3/4	2	—	1 1/4	5/32	3/8
3043	2	1 5/16	2 1/8	—	1 7/16	5/32	1/2
3054	2 5/16	2	2 5/16	1 11/16	1 7/16	5/32	3/8
3064	2 7/16	2 1/8	2 1/2	1 11/16	1 7/16	5/32	13/16
3075	2 1/2	2 1/2	2 5/8	2 1/8	1 3/4	5/32	1 1/8
3085	2 11/16	2 3/8	2 3/4	2 1/8	1 3/4	5/32	1 3/8
3096	2 13/16	2 5/8	2 13/16	2 1/8	1 5/8	3/16	1 3/8
3107	2 13/16	2 3/4	2 15/16	2 5/8	2 1/8	3/16	1 15/16
3117	3 1/8	2 15/16	3 3/16	2 5/8	2 1/8	3/16	2 1/2
3128	3 5/8	3 1/8	3 1/2	3	2 7/16	1/4	3 1/2
3138	3 5/8	3 7/16	3 5/8	3	2 7/16	1/4	4 1/4
3149	4 1/8	3 11/16	4 1/8	3 5/16	2 11/16	1/4	5

*Individual transformer performance requirements will determine the size.

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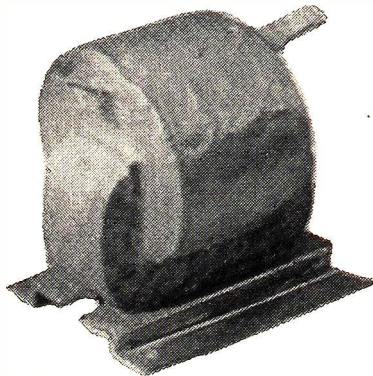
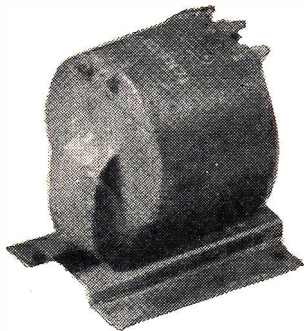
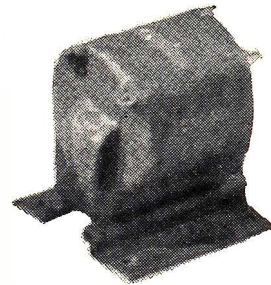
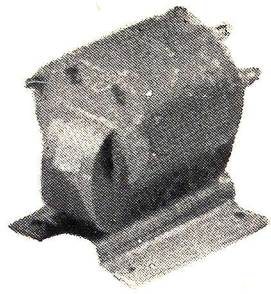
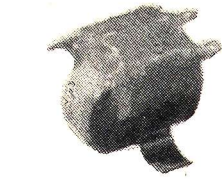
EQUIPMENT FOR ELECTRONICS

Fosterite treated transformers utilize Type C Hipersil® cores in a one loop design to achieve a standard design transformer that will fit most applications with minor adaptations. The Fosterite coating applied to these units gives the best protection available for uncased transformers against humidity, immersion and temperature extremes. In addition to standard communications and radar applications, these transformers are being used extensively in other air-borne equipment.

power, low voltage pulse circuits. The four general types are: (1) Blocking Oscillator or regenerative drive, (2) Pulse Trigger or current transformer, (3) Low Power Pulse output transformer, and (4) Coupling Transformers.

Charging Reactors—Charging reactors are used between the D-C power supply and Pulse-forming network in low voltage pulse circuits. Depending on circuit constants and repetition rates, they operate as resonant, hold-off diode, or linear types.

Low Power Pulse Transformers — These pulse transformers are designed for use in low



POWER TRANSFORMERS							
125/117/108 Volts Primary, 380 to 1600 Cycles, Single Phase, 50° C Rise, 80° C Ambient							
ELECTROSTATIC SHIELD				FOSTERITE TREATED			
PLATE SUPPLY A-C VOLTS	D-C MA	RECTIFIER FILAMENTS		OTHER WINDINGS		CATALOG NUMBER	SIZE NUMBER
		VOLTS	AMPS	VOLTS	AMPS		
205-0-205	25	6.3CT	1	6.3/5*	2	7K53	3054
230-0-230	40	6.3CT	2	6.3/5*	2	7K54	3064
295-0-295	63	6.3CT	2	5	2	7K55	3096
350-0-350	100	6.3CT	3.5	5	3	7K56	3075
400-0-400	160	6.3CT	4.5	5	3	7K57	3107
535-0-535	250	6.3CT	6	5	6	7K58	3128
550-0-550	400	6.3CT	8	5	6	7K59	3149

*CT on 5 V.

PLATE TRANSFORMERS					
125/117/108 Volts Primary, 380 to 1600 Cycles, Single Phase, 50° C Rise, 80° C Ambient					
ELECTROSTATIC SHIELD			FOSTERITE TREATED		
PLATE SUPPLY AC VOLTS	APPROX. OUTPUT D-C VOLTS	D-C MA	TYPE FILTER INPUT	CATALOG NUMBER	SIZE NUMBER
350-0-350	350	100	Capacitor	7J60	3054
400-0-400	400	160	Capacitor	7J61	3075
430-390-0-390-430	440/400	250	Capacitor	7J62	3107
435-0-435	315	100	Choke	7J64	3054
520-435-0-435-520	400/315	160	Choke	7J65	3075
535-0-535	400	250	Choke	7J66	3096
550-0-550	420	400	Choke	7J67	3117
620-0-620	500	250	Choke	7J68	3107
870-0-870	750	250	Choke	7J69	3117
1150-0-1150	1000	250	Choke	7J70	3138

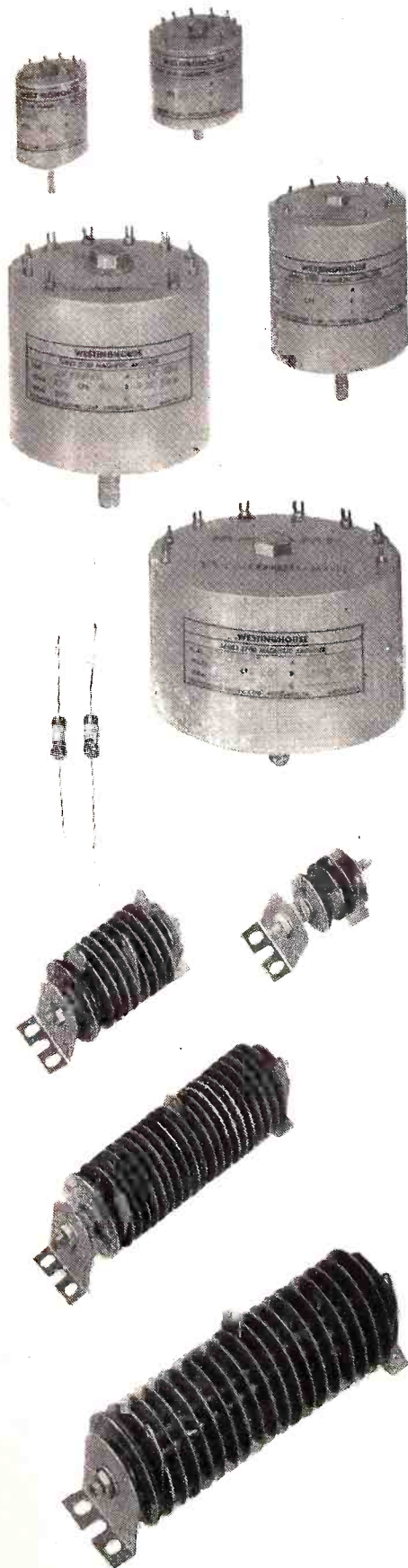
FILTER CHOKES							
760 to 3200 Cycles 50° C Rise 85° C Ambient Fosterite Treated							
HENRIES AT RATED D-C	D-C AMPS	D-C RESIST. 85° C	RIPPLE VOLTAGE 760 CYCLES		RMS TEST VOLTAGE	CATALOG NUMBER	SIZE NUMBER
			MAX.	MIN.			
3.15	.040	312	117	25	2000	7 x 56	3032
2.5	.063	238	140	30	2000	7 x 57	3032
2.0	.100	175	165	35	2000	7 x 58	3043
1.6	.160	115	176	35	2000	7 x 59	3054
1.25	.250	80	188	40	2000	7 x 60	3075
1.00	.400	53	202	45	2000	7 x 61	3096
1.25	.250	150	475	70	3500	7 x 63	3054

FILAMENT TRANSFORMERS							
50° C Rise, 80° C Ambient, 380 to 1600 Cycles, Single Phase, All Secondaries center-tapped, Electrostatic Shield, Maximum Regulation 15% at 100% P.f.							
VA	PRIMARY VOLTS	SECONDARY VOLTS	AMPERES	DIELECTRIC TEST VOLTS RMS		CATALOG NUMBER	SIZE NUMBER
				PRIMARY	SECONDARY		
7½	125/117/108	2½	3	1500	1500	7H89	3011
12½	125/117/108	2½	5	1500	5000	7H90	3021
25	125/117/108	2½	10	1500	7500	7H91	3032
37½	125/117/108	2½	15	1500	7500	7H92	3043
10	125/117/108	5	2	1500	1500	7H93	3011
15	125/117/108	5	3	1500	1500	7H94	3021
30	125/117/108	5	3	1500	2000	7H95	3032
40.2	125/117/108	5	3	1500	1500	7H96	3043
		6.3	4		1500		
67½	125/117/108	5.2	13	1500	1500	7H97	3054
1.89	125/117/108	6.3	0.3	1500	1500	7H98	3011
3.78	125/117/108	6.3	0.3	1500	1500	7H99	3011
		6.3	0.3		1500		
7.56	125/117/108	6.3	0.6	1500	2000	7H100	3011
		6.3	0.6		2000		
25.2	125/117/108	6.3	4	1500	1500	7H101	3032
37.8	125/117/108	6.3	6	1500	1500	7H102	3043
63	125/117/108	6.3	10	1500	1500	7H103	3054
9.4	125/117/108	7.5	1.25	1500	2000	7H104	3011
18.8	125/117/108	7.5	2.5	1500	2000	7H105	3021
60	125/117/108	10	6	1500	1500	7H106	3054

WESTINGHOUSE ELECTRIC CORPORATION, P. O. BOX 868, PITTSBURGH 30, PA.



MAGNETIC AMPLIFIERS MAGAMP



MAGAMPS, Westinghouse magnetic amplifiers, of either the self-saturating type or simple saturable reactor type, can be designed for a wide range of specific applications. They can be either designed to operate from control input powers as low as milli-microwatts or designed to deliver output powers of several kilowatts. They can be constructed to operated from any a-c supply voltage, either single or poly-phase, ranging from a few volts to several hundred volts, and at frequencies ranging from the lowest power frequency to the megacycle range.

MAGAMPS have been applied in servo systems as complex as aircraft autopilots, in the control of motors from the smallest fractional horsepower size to the largest steel mill drive, in the regulation of gen-

rator voltages from the miniature aircraft unit to the central station generator. They have been used to amplify the minute outputs of thermocouples, photocells, ionization chambers, and strain gauges. Other applications have included arc welding controls, ignitron firing controls, paper mill reel control, automatic battery chargers, and isolation metering of d-c voltages and currents.

MAGAMPS are available in the 3700 series under five general numbers, as shown in the table below. They may also be engineered for specific applications. This service is available through the Materials Division, Westinghouse, East Pittsburgh. For complete descriptive information, request Technical Data 52-600.

OPERATING CHARACTERISTICS OF 3700 SERIES MAGNETIC AMPLIFIERS

Amplifier Type Number	3704	3708	3712	3716	3720
Type of Circuit	Doubler	Doubler	Doubler	Doubler	Doubler
Nominal Power Output (1)	0.04w.	0.3w.	7.0w.	40w.	180w.
D-C Ampere-Turns for control (2)	0.35	0.60	2.0	3.3	5.5
Supply Voltage: Volts	6.3	12.6	30	115	230
Freq.	60	60	60	60	60
Phase	1	1	1	1	1
Max. Figure of Merit, $M_u(3)$	170	310	410	1000	1200
M_u for 3 cy. Response (3)	80	130	150	200	...
Time Delay: (4) Constant k_1	2.6×10^{-3}	3.7×10^{-3}	6.8×10^{-3}	7.5×10^{-3}	8.5×10^{-3}
Inherent Delay Cons. k_2	1.5	1.6	1.9	2.4	3
Output Current: (5) Rated	0.150a.	0.24a.	0.60a.	0.60a.	1.1a.
Max. Power Output	0.016a.	0.603a.	0.50a.	0.96a.	3.3a.
Load Resistance: Rated	...	...	20	130	175
Max. Power Output	200	100	28	60	35
Max. Power Gain	200	100	40	175	250
Rectifiers: Self-Sat.	12G11KE1C 2 req'd	21F12KA1A	23F14KA1B	23F18KA1B	24F18KA1A
Recommended Complementary	12G11KE1C 4 req'd	21F41KA1D	23F41KA1D	24F44KA1D	24F112KA1D 2 req'd
Weight of Reactor Assem.	0.13 lbs.	0.20 lbs.	0.85 lbs.	2.5 lbs.	7.0 lbs.
Size of Assem: Dia.	1 1/4"	1 1/2"	2 1/4"	3 1/4"	4
Height	1 1/2"	1 1/2"	2 1/4"	2 3/4"	2 1/2" x 2 units

1. Power output at top of linear region of control curve.
 2. Control ampere-turns from cutoff to top of linear region of control curve.
 3. The figure of merit, M_u , is the ratio of power gain to time delay for 63% response. Power gain is the ratio of the change in output power for a change in input power at the optimum value of load resistance. The time delay is expressed in cycles of supply frequency (60 cycles).
 4. Time delay is given by equation of the form $T = k_1 \frac{N^2}{R} + k_2$ cycles of supply frequency where $\frac{N^2}{R}$ equals $\left(\frac{N^2}{R} \text{ for control circuit A} \right) \text{ plus } \left(\frac{N^2}{R} \text{ for control circuit B} \right) \text{ plus } \left(\frac{N^2}{R} \text{ for control circuit C} \right)$.
 5. RMS value given if output is A-C, average value given if output is D-C.
- For further information, request T.D. 52-600.

YOU CAN BE SURE...IF IT'S

Westinghouse

P.O. BOX 868, PITTSBURGH 30, PA.

INSTRUMENTS

THE MOST COMPLETE LINE IN THE INDUSTRY

Westinghouse instruments are designed, manufactured and approved under the most severe National Standards to meet exacting engineering requirements. The completeness of the lines of Westinghouse instruments gives the builder and the ultimate user the widest choice of matched instruments for any application.

The general points to consider when selecting instruments are: 1. Accuracy desired; 2. Scale range; 3. Single or multiple scale; 4. Size; 5. Appearance.

With literally hundreds of types available—for measuring all electrical quantities, temperature, position and time—Westinghouse brings you the results of over 65 years' experience in designing and manufacturing better instruments for better performance. We built our first instruments in 1888 and have samples to prove it.

Westinghouse representatives and specialized instrument sales engineers are available all over the country to help you make the proper selections.

SWITCHBOARD As the name implies, these instruments are standard equipment on switchboards in power and switching stations, aboard ships, and in the factory. They also are generally applied to control boards and test boards in laboratories and on production lines and to large radio transmitters because they provide maximum accuracy and readability for this type of service. For complete explanation of types of A-C or D-C Switchboard Instruments available, request Catalog Section 43-200.

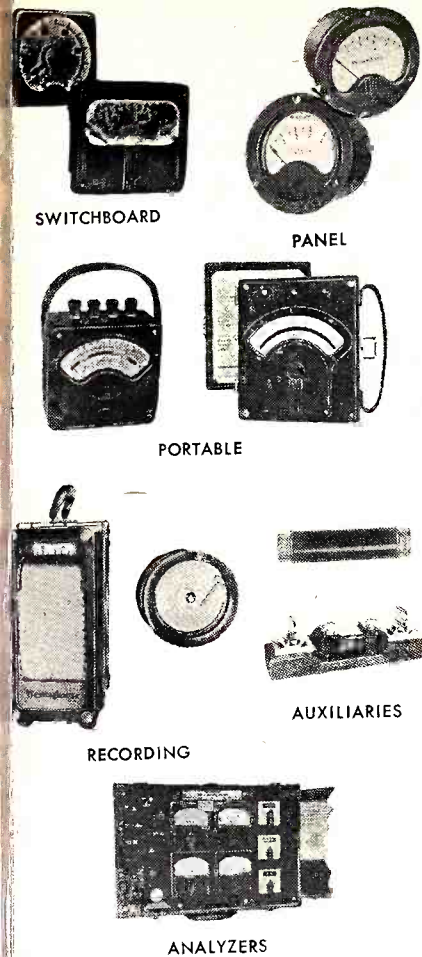
PANEL Westinghouse Panel Instruments are available for measuring direct current, alternating current, audio frequency, radio fre-

quency, decibels and elapsed time. Available in sizes of 2½, 3½ and 4½ inches, in surface or flush mounting styles and in round or rectangular design. Catalog Section 43-300 is available free on request.

PORTABLE Because of their broad scope of operation, portable instruments are required in a wide variety of ranges, sizes and accuracies. Each type has many different applications . . . but each application can best be served with a particular instrument. The portable instruments shown below represent only a small portion of the varieties available. To aid your selection of the best instrument for your particular application, request Catalog Section 43-100.

RECORDING Westinghouse Recording Instruments are available in switchboard, portable and wall mounting styles in direct current and alternating current types and with round or strip charts. The Recorders are furnished with a broad line of movements to meet all electrical measuring requirements. For complete data ask for Catalog Sections 43-400 and 43-415.

AUXILIARIES These include self-contained units for extending the application of instruments into the measurement of speed and for the measurement of high values of a-c and d-c current and voltage. The general auxiliaries Westinghouse features are Tachometer Generators, Portable Transformers, External Resistors and Shunts in a wide selection of ratings. Request Catalog Section 43-800 for complete details, ratings and descriptive data.



SWITCHBOARD

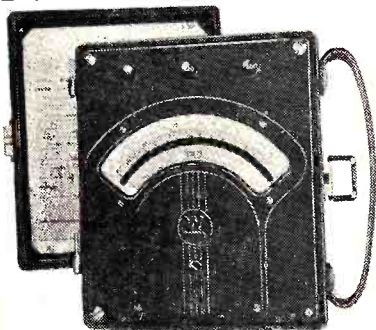
PANEL

PORTABLE

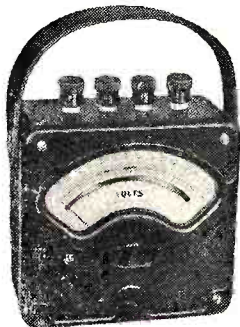
RECORDING

AUXILIARIES

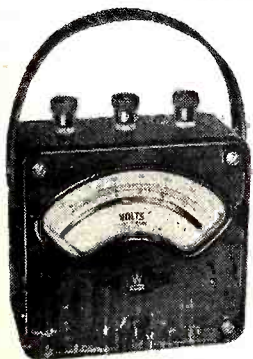
ANALYZERS



P-5 VOLTMETER



P-4 TRIPLE RANGE VOLTMETER



P-4 DOUBLE RANGE VOLTMETER

TYPE P-5 LINE (Accuracy ½ %)

The Type P-5 series of Westinghouse instruments is designed to withstand severe portable service and still maintain the highest degree of accuracy over long periods of time. A combination of high-grade mirrored dials and knife-edge pointers eliminates parallax and

assures accurate reading. Scale length is 5 inches and divisions are arranged to aid quick reading. Maximum versatility is achieved with multi-range scale, some of which incorporate seven ranges. Pre-aged Moldarta* case does not warp or deteriorate.

FULL SCALE RANGE OF STANDARD RATINGS			
TYPES PA-5 AND PY-5 FOR ALTERNATING CURRENT		TYPE PX-5 FOR DIRECT CURRENT	
Ammeters	0-5 to 0-200	Ammeters	0-.05 to 0-50
Milliammeters	0-10 to 0-750	Milliammeters	0-.03 to 3,000
Volt-Ammeters	0-75 to 0-750 volts	Microammeters	0-10 to 0-750
	0-1 to 0-25 amps	Volt-Ammeters	0-3 to 0-150 volts
Voltmeters	0-3 to 0-750		0-.03 to 0-30 amps
Wattmeters	0-20 to 0-30,000	Millivoltmeters	0-2 to 0-2,000
		Voltmeters	0-1 to 0-1500

TYPE P-4 LINE (Accuracy ¾ %)

Type P-4 line is designed for operating convenience.

Lightweight: a-c instruments weigh only 2 lbs; d-c instruments 3 to 4 lbs.

Moldarta Case: is non-warping, weather-resisting. 4½" x 4½" x 2".

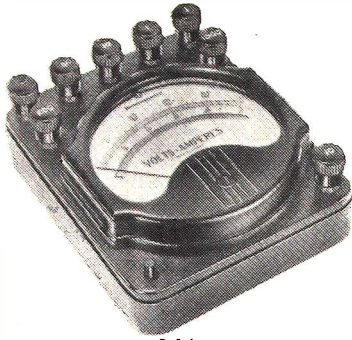
FULL SCALE RANGE OF STANDARD RATINGS			
TYPE PY-4 FOR ALTERNATING CURRENT		TYPE PX-4 FOR DIRECT CURRENT (Also Radio-frequency and Rectifier Types)	
	AMMETERS	0-1 TO 0-50	
	MILLIAMMETERS	0-5 TO 0-750	
	VOLTMETERS	0-1 TO 0-750	
Ammeters	0-.25 to 0-300	Voltmeters	0-1 to 0-750
Radio frequency	0-.5 to 0-20	Rectifier type	0-.5 to 0-150
Milliammeters	0-1 to 0-3,000	Millivoltmeters	0-2 to 0-100
Radio frequency	0-75 to 0-800	Volt-Ammeters	0-1.5 to 0-150 volts
Rectifier type	0-1.5 to 0-20		0-.15 to 0-60 amperes
Microammeters	0-25 to 0-1,000		
Rectifier type	0-500		

(For Complete Ordering Information, See Catalog Section 43-100)

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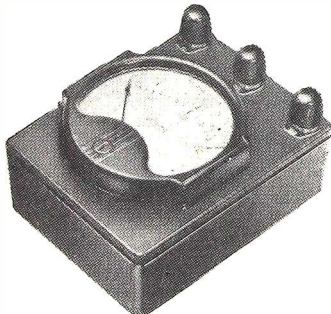
INSTRUMENTS



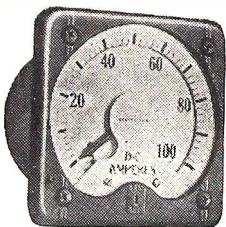
P-14
VOLT-AMMETER



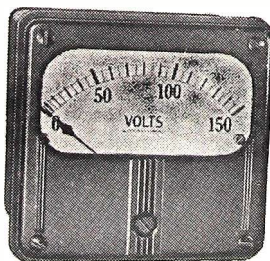
P-14 HINGED COVER



P-12
VOLTMETER



K-24
AMMETER



K-25
VOLTMETER

PORTABLE INSTRUMENTS

TYPE P-14 LINE (Accuracy 1%)

The Type P-14 portable instrument includes features of larger portables, including magnetic shielding, plus added advantages of extremely light weight and smaller overall dimensions. Its accuracy, versatility and low cost make it ideal for field and radio testing. Up to 4 voltage or

current ranges available with multi-range scales. Combinations such as 3 current and voltage ranges in the same instrument make this an extremely versatile instrument. Measuring only 5 1/4" x 4 1/4" x 2 1/2"; both hinged cover and open-faced models are pocket size.

FULL SCALE RANGE OF STANDARD RATINGS

TYPE PA-14 FOR ALTERNATING CURRENT

Voltmeters	0-1.5 to 0-750
Ammeters	0-.5 to 0-50
Milliammeters	0-5 to 0-500

TYPE PX-14 FOR DIRECT CURRENT

Voltmeters	0-.75 to 0-800
Millivoltmeters	0-10 to 0-5,000
Ammeters	0-.5 to 0-50
Milliammeters	0-1 to 0-2,000
Microammeters	0-20 to 0-5,000

Also available in rectifier and thermocouple types.

(For Complete Ordering Information, See Catalog Section 43-100)

TYPE P-12 LINE (Accuracy 2%)

The Type P-12 line includes single and multiple range ratings for complete D-C and A-C current and voltage measurements. It meets all requirements, including shielding, insulation, etc. required for 2% portable instruments in A.S.A. C39.1. Provides the same high degree of reliability,

overload capacity and range coverage contained in larger types.

LIGHTWEIGHT: A-C instruments weigh from 1 to 1 1/2 lbs. D-C instruments from 1 1/2 to 2 lbs.

POCKET SIZE: A-C—4 1/4" x 3 1/4" x 2 5/16"; D-C—4 1/4" x 3 1/4" x 1 3/4".

FULL SCALE RANGE OF STANDARD RATINGS

TYPE PA-12 FOR ALTERNATING CURRENT

Self Contained Current—From 5 milliamperes to 50 amperes
Self Contained Voltage—From 1.5 volts to 300 volts. Also available in rectifier types.

TYPE PX-12 FOR DIRECT CURRENT

Self Contained Current—From 20 microamperes to 50 amperes
Self Contained Voltage—From 10 millivolts to 800 volts

(For Complete Ordering Information, See Catalog Section 43-100)

SWITCHBOARD INSTRUMENTS

24-LINE (Accuracy 1%)

4 1/2" Class—Circular Scale, Rectangular Front—Round-body Case for Flush Mounting. Because of its extra-long scale, the 24-Line instrument combines high readability with minimum panel space require-

ments, particularly useful where panel area is at a premium. The pointer travel gives a scale length more than twice as long as other types which require the same panel space.

25-LINE (Accuracy 1%)

6" Class—Rectangular Case—Flush or Projection Mounting—Optional Internal Illumination. Westinghouse 25-Line instruments meet the requirements of many special installations. Simplicity of design,

uniform appearance, interchangeability and availability of movements for any measurements, make this instrument especially suited for modernization as well as for new installations.

FULL SCALE RANGE OF STANDARD RATINGS—24 and 25 LINES

DIRECT CURRENT

Ammeters—0-1 to 0-50 (self-contained)
Ammeters for use with shunts—0-50 or 0-100 millivolts
Voltmeters—0-2 to 0-800 (self-contained)
Milliammeters—0-1 to 0-500
Wattmeters—120 or 240 volts, 0-50 or 0-100 millivolts for external shunts. (25 line only)

ALTERNATING CURRENT

Ammeters—(24 line)—0-1 to 0-20 (self-contained)
(25 line)—0-1 to 0-50 (self-contained)
Ammeters for use with transformers—0-5
Voltmeters (24 line)—0-150 to 0-600 (self-contained)
(25 line)—0-15 to 0-800 (self-contained)
Voltmeters for use with transformers—150
Wattmeters for use with transformers—5 amperes—120 volts
Frequency meters—(24 line)—120 volts, 60 cycles
(25 line)—120 volts, 25 or 60 cycles

(For Complete Ordering Information, See Catalog Section 43-200)

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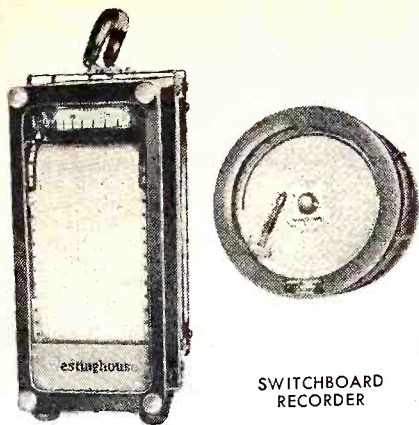
P.O. BOX 868, PITTSBURGH 30, PA.

RECORDING INSTRUMENTS

TYPE G-40 DIRECT ACTING STRIP CHART RECORDER (Accuracy 1%)

Perfection of detail in chart drive, chart reroll, chart threading and inking system, makes Type G-40 Recorders easier to operate and has removed many causes of lost records. Available for switchboard or portable applications.

Chart has double perforations for positive traction or driving drum. Accurate synchronous motor clock, furnishes drive power for chart. Chart speeds of $\frac{3}{4}$ ", $1\frac{1}{2}$ ", 3" or 6" per hour or per minute.



G-40 PORTABLE RECORDER

SWITCHBOARD RECORDER

TYPE A ROUND CHART RECORDER (Accuracy 2%)

A low first-cost, low-maintenance recording instrument for a variety of applications where chart records of 2% accuracy are adequate for their purpose. Extra-sturdy construction makes this a particularly convenient instrument for field service jobs. Portable, switchboard

mounting, wall mounting or detachable socket-mounting cases are available. Scale length is 2 inches, but chart has suppressed zero scale with divisions comparable in size and readability to those of much longer scales.

PANEL INSTRUMENTS

33-LINE (Accuracy 2%) — 2½" Class

Scale Lengths, 1.5" to 1.8". Four different flush mounting types of cases are available: the Military Standard; the round, wide-flange instrument; the round, narrow-flange type;

the rectangular type. Projection mounted instruments also are available in round case. Cases are interchangeable.

35-LINE (Accuracy 2%) — 3½" Class

Scale Lengths, 2.06" to 2.4". Available as a complete line in five types of cases and mounting covering Military, Laboratory, industry and radio applications. The ratings cover the

broadest field consistent with prevailing requirements for instruments of this class. Cases are interchangeable without adapters.

37-LINE (Accuracy 2%) — 4½" Class

Scale Lengths, 2.8" to 3.2". The largest of the miniature panel instruments. The self-contained ratings cover the broadest possible field for this class of instruments. Higher

ratings may be obtained by using external resistors, shunts or transformers. Five types of cases are interchangeable throughout the line.

FULL SCALE RANGE OF STANDARD RATINGS — TYPES 33-35-37

DIRECT CURRENT
Ammeters
Milliammeters
Microammeters
Voltmeters
Millivoltmeters

0-1 to 0-50
0-1 to 0-800
0-20 to 0-800
0-1 to 0-800
0-10 to 0-500

Milliammeters
(For freq. of 15 to 500 cps)
Rectifier
Radio Frequency
Microammeters
Rectifier

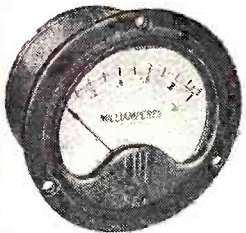
0-5 to 0-500
0-1 to 0-10
0-10 to 0-800
0-100 to 0-500

ALTERNATING CURRENT
Ammeters
(For frequencies of
15 to 500 cps)
Radio Frequency

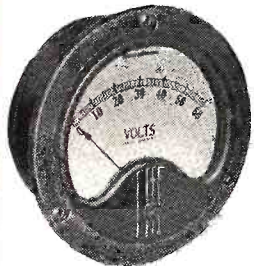
0-1 to 0-50
0-1 to 0-20

Voltmeters
(For freq. of 25 to 125 cps)
Rectifier
DB Meters
Rectifier

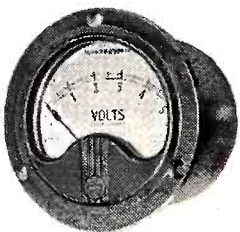
0-1.5 to 0-800
0-3 to 0-300
Standard Scales



N-35
FLUSH
MOUNTING



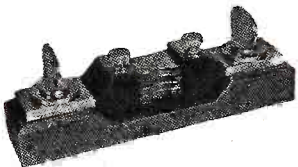
N-33
FLUSH
MOUNTING



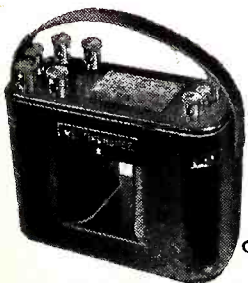
N-37
FLUSH
MOUNTING



TUBULAR RESISTOR



PORTABLE SHUNT



CURRENT TRANSFORMER

AUXILIARY EQUIPMENT

SECTIONAL TUBULAR RESISTORS FOR D-C INSTRUMENTS:

The sectional construction of these resistors permits a wide range of accurate measurements of high voltages with one milliamper instrument. Resistance values $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ or 1 meg-

ohm are standard, and combinations of these may be easily and quickly put together to form any complete unit. Designed for panel mounting or portable use.

TYPE G AND GG SHUNTS FOR D-C MEASUREMENT:

Type G and GG shunts provide a complete line for use with indicating or recording instruments for measuring direct currents beyond the range of self-contained instruments.

Portable and switchboard types are available in 50 and 100 millivolt sizes with many different current ratings.

PORTABLE POTENTIAL AND CURRENT TRANSFORMERS:

For measuring electrical quantities greater than the self-contained ranges for which the instruments are rated, these portable poten-

tial and current transformers offer a convenient and accurate means of increasing the usefulness of an instrument.

WESTINGHOUSE ELECTRIC CORPORATION, P. O. BOX 868, PITTSBURGH 30, PA.



EQUIPMENT FOR ELECTRONICS

SELENIUM RECTIFIERS MAGAMP

Westinghouse MAGAMP Selenium Rectifiers have three classifications according to reverse leakage current. The upper limits for Classes A, B and C are 0.3, 0.4 and 0.5 milliamperes per square inch respectively, at 15 volts 400 cycles per second. Table below lists the sizes that are available, giving the active area for each size, the rated half-wave forward current, the maximum limit for forward voltage drop, and the maximum leakage currents at 15 volts, 400 cycles for Classes A, B, and C rectifiers.

Although leakage limits are given here for 400 cycles per second, Westinghouse MAGAMP Selenium Recti-

fiers are equally suitable for 60 cycle applications. The 60 cycle leakage current is approximately one-half the 400 cycle leakage current at any given voltage at room temperature.

Westinghouse Type K cells are tested individually and retested after assembly and sealing or treatment with a protective coating. Unless otherwise specified, the insulation of all rectifier assemblies is given a 60 cycle one minute withstand test, at twice the terminal voltage rating plus 1000 volts, between cell terminals and mounting brackets or case. Request Technical Data 52-650 for complete information.

CURRENT RATINGS AND ELECTRICAL LIMITS

CELL NUMBER		CELL SIZE INCHES	ACTIVE AREA SQUARE INCHES	Rated Forward Current ³ Milliamperes Half-Wave			Forward Voltage Drop ³ Per Cell Half-Wave at Forward Current Shown	Reverse Leakage in Milliamperes Half-Wave at 15 RMS Volts, 400 Cycles ²			
				1-7 CELLS	8-9 CELLS	10-12 CELLS	FORWARD CURRENT MILLIAMPERES	VOLTS	CLASS A	CLASS ¹ B	CLASS ¹ C
11		1/8 Dia.	0.012	7.5	6	5	7.5	1.5	....	....	.007
12		1/4 Dia.	0.05	30	25	20	30	1.5	....	....	.028
				1-8 CELLS	9-20 CELLS	OVER 20 CELLS					
*21		1 x 1	0.5	125	95	80	80	.75	.15	.20	.25
*22		1.2 x 1.2	0.8	155	145	125	125	.75	.24	.32	.40
*23		1.5 x 1.5	1.5	300	280	240	240	.75	.45	.60	.75
*24		2 x 2	3.0	600	560	480	480	.75	.90	1.2	1.50
*25		3 x 3	7.0	1400	1300	1120	1120	.75	2.25	3.0	3.75

1. The manufacturer reserves the right to substitute rectifiers of a higher class when necessary to expedite orders unless "no substitution" is specified. The milliamperere limits shown determine the class designation.

2. Leakage values at 60 cycles are approximately one-half the leakage values at 400 cycles at room temperatures.

3. Applies to both 60 and 400 cycles at ambients up to 75°C.

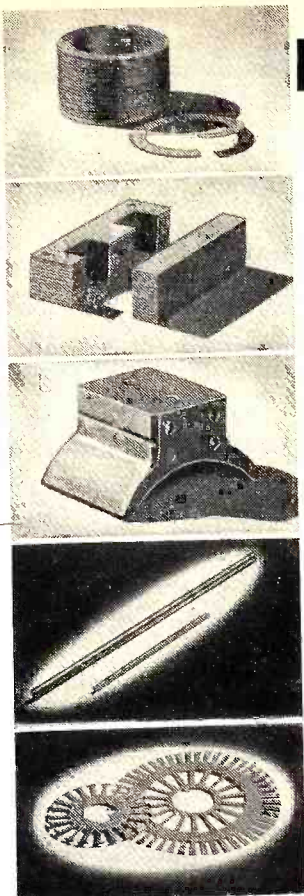
*Can be supplied in any desired cell combination for full-wave and bridge circuits.

YOU CAN BE SURE... IT'S

Westinghouse

P.O. BOX 868, PITTSBURGH 30, PA.

MAGNETIC METALS AND ALLOYS



These metals offer a wide variety of permeability characteristics, low hysteresis losses and high purity. Where their characteristics are particularly suited to the requirements of

Hipernik V® — A 50% iron-nickel grain oriented alloy. Supplied in toroidal coils of .002" and .005" lamination thickness. Both material and core are carefully processed under laboratory control to assure uniform characteristics.

Conpernik® — An iron-nickel alloy of the same chemical composition as Hipernik, but of different electromagnetic characteristics produced by a special annealing process. It is most applicable where a component having high ratio of reactance to resistance (high Q) is required. Also used in choke coils and other components having a high d-c component of current.

Other Alloys that serve a wide range of functions are Kovar®, Puron*, Cupaloy*, K42B®, Refactaloy® and Discaloy®. These

*Trademark

the application, these alloys are superior to other magnetic materials and will improve performance.

Hipernik® — An alloy of iron and nickel with small amounts of manganese and silicon added. It has high initial and maximum permeability and low hysteresis loss. It has a wide range of applications — sensitive relays, a-c meters, magnetic shields, audio transformers, instrument transformers, reactors, etc.

Hiperco® — An iron-cobalt alloy containing 1/3 cobalt, 2/3 iron and 1 to 2% of another element to increase the electrical resistivity. Used primarily for aircraft equipment where size and weight saved is a vital factor. Transformers, generators, motors and high speed aerial cameras are some of the uses.

are used for electrodes, contacts, for sealing glass and metal, for tube lead-in wires, and for high strength at elevated temperatures.

INDICATING LAMPS — SWITCHES



Rectangular Minalite® is a medium sized low-drain indicating lamp designed for extreme angular visibility and to provide the utmost in sturdiness, compactness, and appearance. Its design matches modern rec-

Round Minalite® is a compact, medium-drain indicating lamp developed especially for miniature steel switchboards, providing the maximum illumination in the smallest possible space. Since some rigidity was sacrificed to obtain the long slender construction, which permits close center spacing be-



The Westinghouse Minatrol® Switch is a compact control switch of smaller dimensions than the conventional Type W control switch, designed particularly for use on miniature switchboards. It is available in

Construction — The Minatrol is a rotary-type switch with the same design features which have made other rotary-type control switches outstanding in performance. The switch handles 125 or 250-volt control circuits directly, using toggle switches with

Performance — The current-carrying capacity and interrupting ability of the Minatrol is ample to handle the usual control circuit without the use of auxiliary interposing relays or intermediate control voltages. The switches are rated at six amperes continuous and can interrupt a non-inductive

Classification — The Minatrol control switches are of two types:

1. Type C, for stay-put and spring return with fixed handles.
2. Type S, for stay-put with removable key handles.

tangular switchboard devices, such as instruments, relays and control switches. It is intended for general indicating or signal purposes on switchboards, control desks, etc.

tween adjacent lamps, it is intended only for such applications where the wire size is not larger than No. 18.

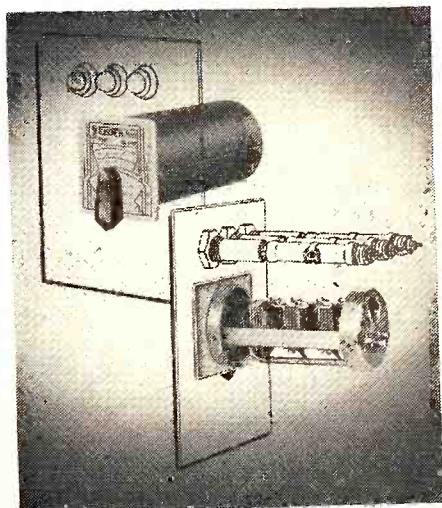
Complete information on component parts, hardware, receptacles and resistors available are contained in Catalog Section 37-200, which will be sent free on request.

forms to suit the varied requirements of control switch applications, and will handle the full control voltage without interposing relays. Its flexibility of application is practically the equivalent of the Type W switch.

quick-make and quick-break contacts mounted in unit-construction frame. It occupies only about one-fourth of the switchboard space required by the conventional switch and has a pleasing appearance, unmarred by the mounting screws.

load of three amperes at 250 volts and six amperes at 125 volts d-c. The switch will interrupt highly inductive currents up to five amperes at 125 volts d-c or up to one ampere at 250 volts d-c. On a-c, these values can be at least doubled at 250 volts maximum.

Two standard lengths are available, one to accommodate a maximum of four switch units, and the other a maximum of eight switch units. A special twelve-switch unit length is available on order. Request Catalog Section 37-175 for complete information.



WESTINGHOUSE ELECTRIC CORPORATION, P. O. BOX 868, PITTSBURGH 30, PA.



THE ELECTRONIC TUBE DIVISION

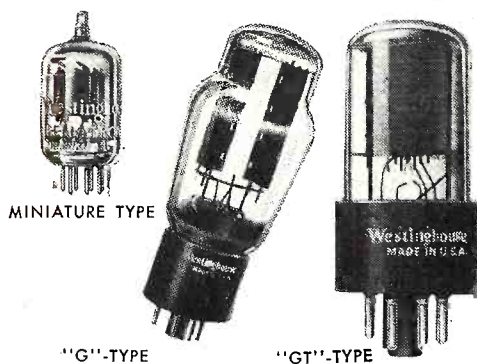
ELMIRA PLANT



BATH PLANT

WHATEVER your tube problem, you'll find the right answer in Westinghouse's complete line of RELIATRONTM Tubes. The establishment of the new Westinghouse Electronic Tube Division last year provided Westinghouse with design, engineering and production facilities second to none — 500,000 sq. feet in the most modern plant in the industry. From here come more than 350 types of receiving tubes for television, radio communications, and industrial applications. Picture tubes from 10 to 27 inch sizes in both glass or metal cone styles. Industrial tubes for resistance welding, rf heating, electronic motor control, power rectification, sorting, counting, weighing, broadcasting, Germanium diodes and transistors in experimental quantities. Most important, every Westinghouse RELIATRON Tube has unmatched quality "built-in."

RELIATRON RECEIVING TUBES



MINIATURE TYPE

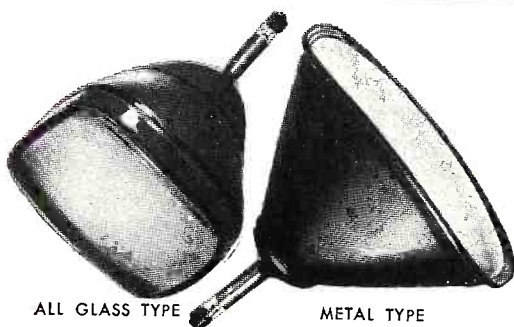
"G"-TYPE

"GT"-TYPE

The huge new Westinghouse Electronic Tube Division plant at Bath, New York is devoted exclusively to the design and manufacture of RELIATRON Receiving Tubes. Types are available for new equipment and the majority of renewal requirements. Miniatures, GT's, Lock-Ins, Metals, and the larger glass styles all carry the famous Westinghouse brand. Whether your requirements concern televi-

sion, industrial equipment, communications or electronic controls you'll do the job better with Westinghouse tubes. Franchised distributors are located in all principal market areas to give you same-day service. Inquiries on production size orders receive prompt personal attention from Westinghouse, in Elmira, or its regional sales offices.

RELIATRON PICTURE TUBES



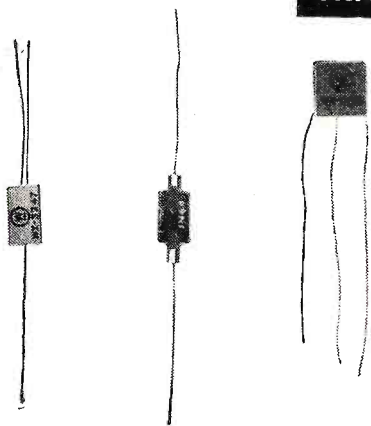
ALL GLASS TYPE

METAL TYPE

You'll produce television pictures of better contrast and sharper focus with Westinghouse RELIATRON Television Picture Tubes. More than 24 types from the 10BP4A to the 27MP4 — are available. No matter

what your requirements — round or rectangular shape, magnetic or electrostatic focus, spherical or cylindrical face plate — chances are you will find a Westinghouse Tube will do the job better.

TRANSISTORS AND GERMANIUM DIODES



The Westinghouse Electronic Tube Division is now producing germanium semi-conductor devices. Both P-N-P junction type and point-contact transistors are available. Germanium Di-

odes having a broad variety of reverse working voltage characteristics are also in production. We invite your inquiries on production or sample quantities.

YOU CAN BE SURE...IF IT'S

ELECTRONIC TUBE DIVISION, ELMIRA, NEW YORK

Westinghouse



EQUIPMENT FOR ELECTRONICS

IGNITRONS

IGNITOR CONTROLLED RECTIFIERS

WELDER CONTROL SERVICE

The Ignitron, capable of high current capacity, is the heart of every heavy-duty resistance welding control. Development of the Ignitron by Westinghouse solved the long-standing problem of satisfactory switching of high currents at speeds of 600 or more operations

per minute. Precise control obtainable with this tube over the magnitude and duration of the current flow assures high quality welds. WL-5550/681 has clamp type cooling. All others are water cooled.

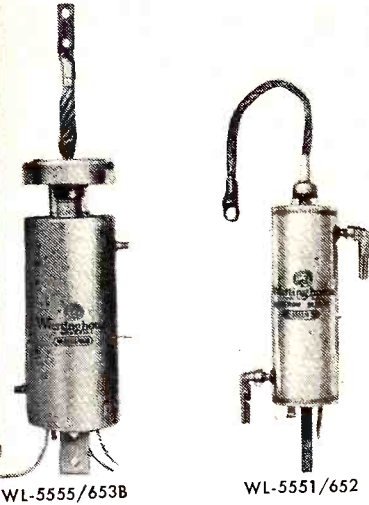
RESISTANCE-WELDER SERVICE:

Type Number	Size	R.M.S. Volts Range	Max. KVA Demand and corresponding Ave. Current		Max. Ave. Current and corresponding KVA Demand	
			KVA	Amps.	KVA	Amps.
WL-5550/681	A	250-600*	300	12.1	100	22.4
WL-5551/652	B	250-600*	600	30.2	200	56
WL-5552/651	C	250-600*	1200	75.6	400	140
WL-5553/655	D	250-600*	2400	192.0	800	355
WL-5554/679		2400	1200	75.0	600	113
WL-5555/653B		2400	2400	135.0	1105	207

*For voltages below the minimum, the minimum voltage-current rating applies.

FREQUENCY-CHANGER WELDER SERVICE

Type Number	Size	Inverse Voltage	Corresponding Rated		Max. Average and Peak Current	
			Peak Amps.	Ave. Amps.	Ave. Amps.	Peak Amps.
WL-5551/652	B	1500	480	4	18	108
		1200	600	5	22.5	135
WL-5822	C	1500	1200	16	56	336
		1200	1500	20	70	420

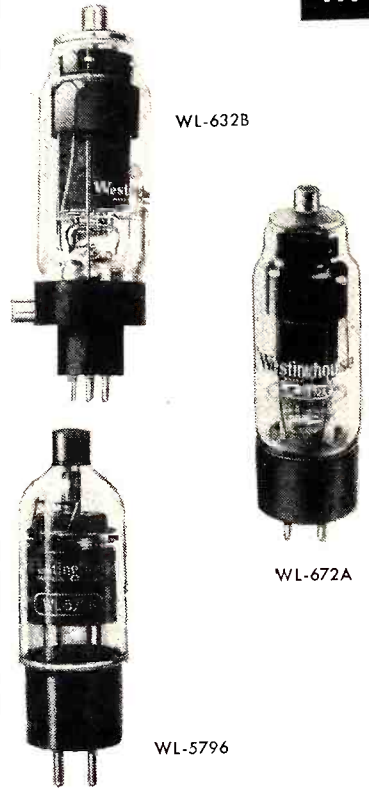


THYRATRONS

The line includes 30 types having a broad range of voltage and current characteristics. They open and close a great variety of work circuits with split-second precision and accu-

racy. If your electronic equipment operates resistance welding, if heating or control devices it will operate better, longer with Westinghouse Thyratrons.

Type Number	Filament Volts	Filament Amps.	Volts Peak Inverse	Amps. Peak	Amps. Ave.	Gas	Number of Electrodes
WL-2D21	6.3	0.6	1300	0.5	0.1	Inert	4
WL-3C23	2.5	7.0	1250	6.0	1.0	Hg.	3
WL-33			See WL-5720/33				
WL-41			See WL-5830/41				
WL-81A	2.5	5.0	500	2.0	0.5	Inert	3
WL-105	5.0	10.0	2500	40.0	6.4	Hg.	4
WL-172	5.0	10.0	2000	40.0	6.4	Hg.	4
WL-414	5.0	20.0	2000	100.0	12.5	Hg.	4
WL-502A	6.3	0.6	1300	1.0	0.1	Inert	4
WL-KU-610	2.5	6.5	500	0.4	0.1	Inert	3
WL-624	5.0	10.0	2500	80.0	6.4	Hg.	3
WL-KU-627	2.5	5.0	5000	2.5	0.64	Hg.	3
WL-KU-628	5.0	12.3	2500	8.0	2.0	Hg.	3
WL-629	2.5	2.6	350	0.2	0.04	Inert	3
WL-632B	5.0	5.0	1500	30.0	2.5	Hg.	4
WL-672A	5.0	5.0	2500	40.0	3.2	Hg.	4
WL-KU-676	5.0	10.0	2500	40.0	6.4	Hg.	3
WL-677	5.0	10.0	10000	15.0	4.0	Hg.	3
WL-678	5.0	7.5	15000	6.0	1.6	Hg.	3
WL-884	6.3	0.6	350	0.3	0.075	Inert	3
WL-885	2.5	1.5	350	0.3	0.075	Inert	3
WL-2050	6.3	0.6	1300	1.0	0.1	Inert	4
WL-5557/17	2.5	5.0	5000	2.0	0.5	Hg.	3
WL-5559/57	5.0	4.5	1000	15.0	2.5	Hg.	3
WL-5664	2.5	6.3	1250	8.0	1.0	Inert	3
WL-5665	2.5	31.0	1250	160.0	16.0	Inert	3
WL-5683	2.5	6.3	1250	8.0	1.0	Inert	3
WL-5684	2.5	9.0	1250	30.0	2.5	Inert	3
WL-5685	2.5	21.0	1250	77.0	6.4	Inert	3
WL-5720/33	5.0	4.5	1000	15.0	2.5	Hg.	3
WL-5796	2.5	8.5	1500	20.0	1.6	Inert	3
WL-5830/41	5.0	20.0	10000	75.0	12.5	Hg.	3



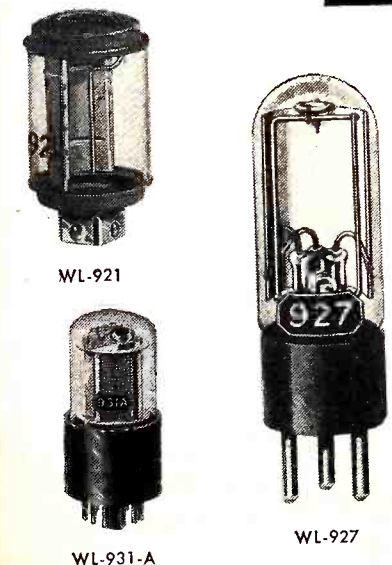
PHOTOTUBES

The Westinghouse RELIATRON Power Tube line includes a complete selection of phototubes for industrial and commercial applica-

tions of all kinds. These tubes are the heart of sorting, counting, weighing and inspecting equipment and the continuous protection and control of many varied mechanical operations.

Type Number	Spectral Range A.U.	Vacuum or Gas	Cathode Response	Luminous Sensitivity Micro-Amps Per Lumen (0 Cycles)	Max. Anode Supply Volts
WL-1P29	3300-9000	Gas	S3	40	100
WL-SR-50	REPLACEMENT ONLY				
WL-SK-60	REPLACEMENT ONLY				
WL-868	4000-12000	Gas	S1	90	100
WL-917	4000-12000	Vac.	S1	20	500
WL-918	4000-12000	Gas	S1	150	90
WL-919	4000-12000	Vac.	S1	20	500
WL-920	4000-12000	Gas	S1	100	90
WL-921	4000-12000	Gas	S1	135	90
WL-922	4000-12000	Vac.	S1	20	500
WL-923	4000-12000	Gas	S1	135	90
WL-924	4000-12000	Gas	S1	90	90
WL-925	4000-12000	Vac.	S1	20	250
WL-926	3300-9000	Vac.	S3	6.5	500
WL-927	4000-12000	Gas	S1	125	90
WL-928	4000-12000	Gas	S1	65	90
WL-929	3000-6700	Vac.	S4	45	250
WL-930	4000-12000	Gas	S1	135	90
WL-931A**	3000-6700	Vac.	S4	*	1250
WL-5581	3000-6700	Gas	S4	135	100

*Sensitivity 20 amperes per lumen at 100 volts per stage. **Multiplier phototube.





EQUIPMENT FOR ELECTRONICS

HIGH VACUUM RECTIFIERS



WL-6102



WL-6103

High vacuum rectifier tubes have peak inverse voltage ratings of from 1500 to 150,000. Cathodes are made only of pure or thoriated tungsten and all parts and assembly are governed by exact-

ing quality control standards. Applications include electrostatic precipitation units, high voltage supplies for X-ray circuits, and equipments for testing cables and insulators.

Type Number	Filament		Volts Peak Inverse	Anode	
	Volts	Amps.		Amps. Peak	Amps. Ave.
WL-456	11.0	20	140,000	0.50	0.06
WL-481-B	2.5	5	25,000	0.015	0.005
WL-579B	2.5	6	20,000	0.27	0.025
WL-616	20.0	24.5	150,000	0.75	0.25
WL-836	2.5	5	5,000	1.00	0.25
WL-5934	2.5	6	20,000	0.27	0.025
WL-5974	10.0	50	125,000	1.00	0.30
WL-6102*	5.0	7.2	40,000	0.9	0.15
WL-6103**	5.0	7.2	20,000	0.9	0.15
WL-8020	5.0	6	40,000	0.75	0.1

*Oil-immersion type

**Forced-air cooled type

GAS AND MERCURY VAPOR RECTIFIERS



WL-872A



WL-857B

Westinghouse Rectifiers supply moderate amounts of direct current at peak inverse voltages up to 22,000. They provide efficient power conversion in both industry and broadcasting. Westinghouse offers a broad line of 12 types designed for these

general power applications as well as for use in power supplies for other equipment utilizing electronic tubes. All Westinghouse Rectifiers are air-cooled.

Type Number	Filament		Volts Peak Inverse	Anode	
	Volts	Amps.		Amps. Peak	Amps. Ave.
WL-3B22/1C	2.5	6.0	725	4.0	1.0
WL-4B24/3C	2.5	11.5	725	10.0	2.5
WL-670A/6C	REPLACEMENT ONLY.				
WL-575A	5.0	10.0	15000	6	1.5
WL-816	2.5	2.0	7500	0.5	0.125
WL-857B	5.0	30.0	22000	40	10.0
WL-866A	2.5	5.0	10000	1	0.25
WL-869B	5.0	18.0	20000	10	2.5
WL-872A	5.0	7.5	10000	5	1.25
WL-5558/32	5.0	4.5	2000	15	2.5
WL-5561/104	5.0	10.0	3000	40	6.4
WL-8008	Same as WL-872A except for base				

MICROWAVE TUBES



WL-1Q22



WL-1B41

Contractors and subcontractors of military electronic equipment will find the new Westinghouse Electronic Tube Division has exceptional qualifications as an experienced supplier of top quality microwave gas switching tubes. Westinghouse

reference cavities for use at X-band frequencies, WL-1B35 and 1B37 ATR's, pre-TR's, and series spark gaps have long life and short recovery times and are the first choice for fine radar equipment.

REFERENCE CAVITIES

Type	Resonant Frequency Megacycles	Loaded Q	Insertion Loss at Resonant Frequency
WL-1Q22	9250±0.3	1900-2400	4-6 db
WL-1Q23	9280±0.3	1900-2400	4-6 db
WL-6089**	9280±0.3	1900-2400	4-6 db
WL-5846*	9280±0.3	1900-2400	4-6 db
WL-1Q24	9310±0.3	1900-2400	4-6 db
WL-1Q25	9375±0.6	1900-2400	4-6 db

*Interchangeable with 1Q23 for attenuator card slot . . . **Similar to 1Q23 except dimensions.

ATR & Pre-TR

Type	Class	Frequency (Megacycles)
WL-1B35	ATR	9000-9600
WL-1B37	ATR	8500-9000
WL-5939WA	Pre-TR (Gas Switching)	1280-1290

SERIES SPARK GAPS

Type	Breakdown Voltage (KV per Tube)	Nominal Peak Modulator Power for 2 Tubes (Megawatts)
WL-1B41	8.7-10.2	2
WL-1B45	13.1-15.1	4
WL-1B49	11.2-12.7	3

SPECIAL PURPOSE TUBES



WL-OA3



WL-5966

VOLTAGE REGULATORS: Westinghouse cold cathode voltage regulator tubes hold voltage variations to within minute tolerances. They can also be adapted for use in relaxation oscillator circuits.

PROTECTOR TUBE: The Westinghouse WL-KX-642 is used to protect supervisory control lines from high voltage surges which might endanger instruments, transformers, and similar equipment.

IONIZATION GAUGE: The Westinghouse WL-5966 Ionization Gauge is the heart of the mass spectrometer, an "electronic chemist" which analyzes gases and vapors speedily and continually.

YOU CAN BE SURE... IF IT'S

Westinghouse

ELECTRONIC TUBE DIVISION, ELMIRA, NEW YORK



EQUIPMENT FOR ELECTRONICS

HIGH VACUUM AMPLIFIERS, MODULATORS, OSCILLATORS

Westinghouse high vacuum electronic tubes have a great variety of applications. They may be used as amplifiers, modulators or oscillators. In industry they are widely useful in rf heating, diathermy and electronic control

equipments. Also used in a wide variety of circuits in broadcast and communications applications. There is a complete line of more than 60 types with power outputs (class C amplifiers) varying from 15 to 125,000 watts.

Type Number	Volts	Filament Amps.	Plate		Diss** Watts	Output Watts Class C	Ampl. Factor	Max. MC For 100% Input
			D-C** Volts	D-C** Ma.				
WL-5736								
WL-813								
WL-5891								
WL-832A								
WL-892								
WL-833A								
WL-4D21/4-125A	5.0	6.5	3000	225	125	375	.....	120
WL-4X150A#	6.0	2.6	1250	250	150	140	.....	500
WL-4X500A#	5.0	13.5	4000	350	500	1320	.....	120
WL-4-1000A#	7.5	21.0	6000	700	1000	3400	.....	110
WL-5D22/4-250A	5.0	14.5	4000	350	250	1000	.....	75
WL-207	22.0	52.0	15000	2000	10000	15000	20	1.6
WL-450TH	7.5	12.0	6000	600	450	1800	38	40
WL-473#	6.0	60.00	5000	1400	2500	3900	22	60
RJ-571	REPLACEMENT ONLY							
WL-801A	7.5	1.25	600	70	20	25	8	60
WL-802	6.3	2.50	750	100	25	15	...	30
WL-803	10.0	5.00	2000	175	125	210	...	20
WL-805	10.0	3.25	1500	210	125	215	50	30
WL-806	5.0	9.50	3000	200	150	450	12.6	30
WL-807	6.3	0.90	600	100	25	40	...	60
WL-808	7.5	4.00	1500	150	50	140	47	30
WL-809	6.3	2.50	750	100	25	55	50	60
WL-810	10.0	4.50	2000	250	125	375	36	30
WL-811A	6.3	4.00	1250	175	45	135	160	30
WL-812A	6.3	4.00	1250	175	45	130	29	30
WL-813	10.0	5.00	2000	180	100	275	...	30
WL-814	10.0	3.25	1250	150	50	130	...	30
WL-815	6.3°	0.8°	400	150	20	44	...	125
WL-826	7.5	4.00	1000	125	60	86	31	250
WL-828	10.0	3.25	1250	160	70	150	...	30
WL-829B	6.3°	1.125°	750	240	40***	87***	...	200
WL-832A	6.3°	0.80°	750	90	15	26	...	200
WL-833A	10.0	10.00	4000	500	400***	1440***	35	20
WL-837	12.6	0.70	500	80	12	20	...	20
WL-838	10.0	3.25	1250	175	100	130	54	30
WL-845	10.0	3.25	1250	120	100	115†	5.3	...
WL-849	11.0	5.00	2500	350	400	560	19	3
WL-862A	33.0	207.00	20000	10000	100000	100000	45	1.6
WL-880	12.6	320.00	10500	6000	20000	40000	20	25
WL-889A	11.0	125.00	8500	2000	5000	10000	21	50
WL-889RA	11.0	125.00	8500	2000	5000	10000	21	40
WL-891*	22.0	60.00	12000	2000	6000	10000	8.5	1.6
WL-891R*	22.0	60.00	10000	2000	4000	10000	8.5	1.6
WL-892*	22.0	60.00	15000	2000	10000	14000	50	1.6
WL-892R*	22.0	60.00	12500	2000	4000	10000	50	1.6
WL-893A##	10.0	61.00	20000	4000	20000	50000	36	5
WL-893AR##	10.0	61.00	20000	4000	20000	50000	36	5
WL-895°	19.0	138.00	17000	9000	40000	100000	37	6
WL-895R°°	19.0	138.00	17000	9000	20000	90000	37	6
WL-1000T	7.5	17.00	7500	750	1000	3000	35	50
WL-1-1623	6.3	0.90	500	60	10	55	20	60
WL-5604#	11.0	176.00	12500	3000	10000	22500	19.5	22.5
WL-5619	11.0	176.00	12500	3000	20000	22500	19.5	22.5
WL-5671	11.0	285.00	15000	8000	25000	70000	39	10
WL-5691	6.3	0.60	275	2.3	1	...	70	...
WL-5692	6.3	0.60	275	6.5	1.75	...	20	...
WL-5693	6.3	0.30	300	3.0	2.0	...	...	...
WL-5736#	6.0	60.00	5000	1400	2500	4100	22	60
WL-5833#°°°	20.0	143.00	18000	10000	35000	125000	37	6
WL-5891#°°°	11.0	95.00	15000	8000	25000	70000	36	10
WL-5936°°°	20.0	143.00	18000	10000	70000	125000	37	15
WL-8000	10.0	4.50	2000	250	125	375	16.5	30
WL-8003	10.0	3.25	1350	250	100	250	12	30
WL-8005	10.0	3.25	1250	200	75	170	20	60
WL-8025A	6.3	1.92	1000	80	40	35	18	500

R—Indicates forced air-cooled radiator.
†Class AB, AF Service.

**Max. C.C.S. ratings in Class C oscillator service.

°Per unit, heater can be arranged to operate from either a 6.3 or 12.6 volt supply.

#Forced air-cooled radiator.

*Two filament strands in series with large post at neutral junction; operate in series at 22 volts or two phase with 11 volts per strand.

***This rating applies only with forced air cooling.

##Six filament strands connected from each post to floating neutral. See individual data sheets for connections. Values shown are per strand.

°°Three filament terminals Y-connected in 3 phase.

°°°Three filament terminals Y-connected in 3 phase with neutral center terminal.

FOR INFORMATION AND PRICES Write to:
THE WESTINGHOUSE ELECTRONIC TUBE DIV.
SALES OFFICE NEAREST YOU, or
Commercial Engineering, Dept. A-500
Westinghouse Electric Corporation
Electronic Tube Division
Elmira, New York

Franchised distributors located in principal market areas, are prepared to give you same-day service on most Westinghouse RELIATRON Tubes. Call them.

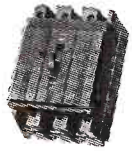
YOU CAN BE SURE...IF IT'S

Westinghouse



EQUIPMENT FOR ELECTRONICS

CIRCUIT BREAKERS AB De-ion®



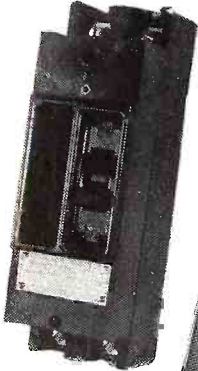
E TYPE 100 AMP.



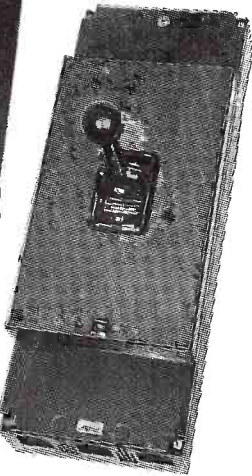
F TYPE 100 AMP.



K TYPE 225 AMP.



J TYPE 225 AMP.



L TYPE 600 AMP.

AB DE-ION CIRCUIT BREAKERS comprise a complete line of fuseless protective devices for distribution, power, lighting and electronic circuits. They are used in individual mountings, built-in applications, separate enclosures, switchboards and panelboards.

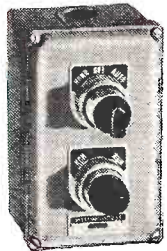
The sturdy moldarta breaker cases form complete self-enclosures, protecting workers and preventing tampering. Standard construction features are the De-ion arc quenchers, quick-make and quick-break mechanisms, and thermal-magnetic trip elements. Request Price List 29-060.

FEATURES OF AB DE-ION CIRCUIT BREAKERS

	Quicklag Quicklag-p 1, 2 Pole	P-1** 1, 2 Pole	E 1, 2, 3 Pole	F 2, 3, 4 Pole	G 2, 3, 4 Pole	J 2, 3 Pole	K 2, 3, 4 Pole	L 2, 3, 4 Pole
RATINGS								
Ampere Ratings (U.L. Listed)	10 50 120	*10 50 120	15 100 277†	15 100	40 100	70 225	70 225	125 600
A-C Voltage Ratings	120/240	120/240	240 240	600	600	600	600	600
D-C Voltage Rating		32	125 125/250 125/250	250	250	250	250	250
Underwriters' Laboratories Interrupting Ratings—Amps.	5,000		5,000 10,000†	10,000	10,000	10,000	10,000	10,000
Interrupting Ratings Amps. A.C.—Based on NEMA Test Procedures	5,000	5,000	5,000 10,000†	600 VAC 15,000 240 VAC 20,000	15,000 15,000	15,000 25,000	25,000 30,000	25,000 40,000
SPECIAL FEATURES (Partial List)								
Inst. Magnetic Trip Only				✓	✓	✓	✓	✓
Non-Automatic		✓	✓	✓	✓	✓	✓	✓
Shunt Trip			✓	✓	✓	✓	✓	✓
Undervoltage Trip				✓	✓	✓	✓	✓
Auxiliary Switch			✓	✓	✓	✓	✓	✓
Alarm Switch				✓	✓	✓	✓	✓
Mechanical Interlock			✓	✓	✓	✓	✓	✓
Reverse Current				✓	✓	✓	✓	✓
Moisture-Fungus Treatment	✓	✓	✓	✓	✓	✓	✓	✓
Complete Electrical Operation					✓	✓	✓	✓
Enclosure Handle Mechanism			✓	✓	✓	✓	✓	✓
*Not U.L. Listed			†Single Pole 15 and 20 amp. ratings for 277/480 V A-C circuits					
			**Thermal only					

CONTROL DEVICES

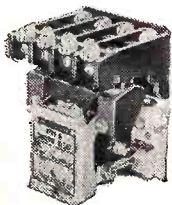
Maximum Interrupting Capacity—Amperes
OIL-TITE UNITS



TYPE OT OIL TITE CONTROL STATION 1 to 12 Unit Sizes Available



OPEN CONTACTOR



TYPE N CONTROL RELAY

PUSHBUTTONS are available in a complete line of Standard, Heavy Duty, and Oil-Tite* units to meet the requirements of manufacturers of electronics equipment. The pushbuttons and selector switch units are rated for continuous current of 10 amperes—see Maximum Interrupting Capacity tabular example at right. For complete information as to types, sizes, interrupting capacities, etc.; request free Descriptive Bulletin 15-000.

VOLTAGE A-C AND D-C	2 AND 3* POINT	4 POINT	SELECTOR SWITCH
110-125 a-c	60	60	60
220-250 a-c	30	30	30
440-480 a-c	15	15	15
550-600 a-c	12	12	12
115-125 d-c	2.2	2.2	2.2
230-250 d-c	1.1	1.1	0.55
550-600 d-c	0.4	0.4	0.2

*Type HD unit only.

CONTACTORS of the famous Westinghouse Life-Linecontactor® design are available in four general classes: Reversing Mounted Life-Linecontactors • Size 00 Multi-Pole Relay • Mounted Life-Linecontactors* • Unmounted Contactors.

In addition, they may be modified with built-in pushbuttons, selector switches, control transformers or special combinations of modifications to

suit the user. NEMA enclosures run from Type I, IA, III, IV, V, VII, and IX for Class II, Groups E, F and G for hazardous locations such as explosive dusts. Standard pole combinations are available for 5 to 2,500 amperes, 600 volts maximum, a-c or d-c. Oil-immersed contactors operate up to 5,000 volts at 200 amperes.

RELAYS built for heavy-duty service on industrial electronic equipment are offered in both a-c and d-c. Among the types available are: Thermal Overload • Magnetic Overload • Time Limit • Thermostatic • Auxiliaries • Mechanical • Multi pole • Shunt Coil • Vibrating.

In addition, complete control panels for special applications can be built to order. Write for Price Lists and Dimension Sheets 15-825 and 15-827 for expanded information on types, sizes and ratings.

YOU CAN BE SURE...IF IT'S

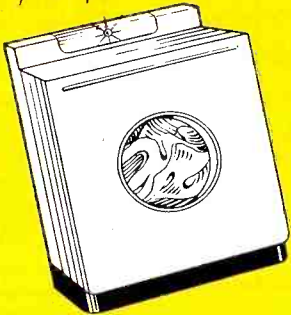
Westinghouse

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to help you
sell! --



A Drake Signal Light is as small in cost as in size—yet it can often tip the scale as a sales-closer for *your* appliance.

At a glance, the Signal Light shows Mr. and Mrs. Prospect extra, positive buying reasons. Its on-or-off warning means *safety* and *power-saving*—helps lengthen appliance life by encouraging proper use. Or, by providing an area of light for working or indicator reading, it makes appliance use *easier*. It always adds the extra touch of attractiveness—usefulness—convenience which persuasively says, "Buy me!"

You'll find expertly designed, well made DRAKE Signal and Jewel Light Assemblies on leading makes of appliances, as well as on electronic devices and controls of all kinds. A wide variety of styles and types are available for easy incorporation into *your* products, to get that extra selling punch—and at so low a cost! Send right now for Catalog EM, telling us the type of appliance you have in mind. Our experience often suggests possibilities which you may have overlooked.

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SOCKET & JEWEL LIGHT ASSEMBLIES

Here's the full line of

SORENSEN

STANDARD UNITS AND SPECIFICATIONS



Nobatron
Model E-6-15

AC Regulator
Model 500S

Nobatron
Model SWR-5

B-Nobatron
Model 500B

Variable Auto
Transformer

Ranger
Model SR-100

AC REGULATORS		Input	95-130 VAC, 1 Φ , 50-60 \sim , 190-260 VAC in "-2S" models			
Models available (numbers denote VA capacities)		Output	115 VAC \pm 5%; 230 VAC with "-2S" models			
150S		Reg. accuracy	\pm 0.1% against line or load			
250S		Distortion	2% - 3% max.			
500S (-2S) also		P. F. range	Down to 0.7			
1000S (-2S) also		Load range	0 to full load			
2000S		Miscellaneous	Fully protected against overload or over-voltage. Models 150S, 250S, 500S, 1000S, 5000S, 10000S, and 15000-2S are self-contained. Cabinets available for others.			
3000S (-2S) also						
5000S (-2S) also						
10000S (-2S) also						
15000-2S						
NOBATRONS** (DC Supply—low voltage)		Input	95 - 130 VAC, 1 Φ , 50-60 \sim . In heavy current 20-volt series - 115/208, 3 Φ , 4-wire, wye.			
Models available (numbers indicate voltage & current)		Reg. accuracy	\pm 0.2% against line or load changes			
E-6-5A		Ripple	1% RMS max.			
E-6-15A		Load range	1/10 to full load			
E-6-40A		Output range	Adjustable \pm 10%; down to -25% at lesser accuracy			
E-6-100A		Recovery time	0.2 seconds - this value includes charging time of filter circuit for most severe change in load or input conditions.			
E-12-5		Miscellaneous	Fully protected against overload and over-voltage. Normally for rack mounting - cabinets available. Normal finish - gray wrinkle. Meters standard in some models; available in all.			
E-12-15		Note	"A" models output either 6 or 7 volts.			
E-12-50						
E-28-5						
E-28-10						
E-28-30						
E-28-70						
E-28-150						
E-28-350						
E-125-10						
E-200-5						
Also Model SWR-5 with output either 6VDC @ 10 amp or 12VDC @ 5 amp						
400 \sim EQUIPMENT: LINE REGULATORS			Similar to 60 \sim regulators except: Accuracy \pm 0.5%; distortion 5% max.; VA capacities 250, 500, 1200, 2500.			
NOBATRONS**			Same general specifications as 60 \sim Nobatrons. Models 6VDC @ 40 amp., 12VDC @ 10 amp., 28VDC @ 10 amp.			
B-NOBATRONS** (DC Supply - high voltage)		Input	105-125 VAC, 1 Φ , 50 - 60 \sim .			
		Load range	0 - full load			
		Ripple	10 mv (20 mv in 1000BB)			
output	Model	3253B*	500S3*	520BB**	5603B*	1000BB*
	VDC	0-325	0-500	200-500	0-500	200-1000
	Ma	0-125	0-300	0-200	0-200	0-500
* meters furnished as standard equipment. regulation accuracy \pm 0.5% bias supply 0-150 VDC @ 0-5Ma (except model 1000BB)						
** no meters, no bias supply regulation accuracy \pm 1.0%						
All have 6.3 VAC, 6-10 amperes, unregulated, C.T. except Model 1000BB.						

*"Isotronic" is a registered trademark denoting the electronic regulation and control of voltage, current, power, and frequency.

** Reg. U. S. Pat. Off. by Sorensen & Co., Inc.

Isotronic



PRODUCTS

STANDARD UNITS AND SPECIFICATIONS

RANGERS (Full-range-variable DC Supplies)	Input range	95 - 130 VAC, 1 Φ , 50 - 60~.			
	Reg. accuracy	$\pm 0.25\%$ at any voltage setting.			
	Ripple	1% RMS max.			
	Output	Model	SR-100	SR-30	SR-2
	VDC	3-135	3-30	100-300	
	Amps	1-10	3-30	1-10	

$\pm 0.01\%$ ACCURACY MODELS

Super-accurate AC Line Regulator Model 1001	Load range Input volt. range Load P. F. range Output voltage Distortion Time constant Reg. accuracy	0 - 1000 VA 95 - 130 VAC, 1 Φ , 55 - 65~. 0.7 lagging to 0.95 leading 115 VAC, 1 Φ (adjustable from 110-120 volts) 3% max. 0.1 seconds $\pm 0.01\%$
DC Power Source for Spectrophotometers Model E-6/2-5 Nobatron	Input volt. range Output #1 for lamp #2 for filament #3 for bias Filtering #1 #2 & 3 Reg. accuracy Time constant	95-130 VAC, 1 Φ , 50-60 cycles 6VDC adjustable $\pm 10\%$ at 5 amperes 6VDC at 100 Ma. 2VDC adjustable $\pm 10\%$ at 100 Ma. 1% max. 0.05% max. $\pm 0.01\%$ against line changes 0.1 seconds under most severe line changes

FREQUENCY CHANGERS

MODELS FCD250 FCD1000 (the above change 50-60 cycles to 400 cycles; capacities of 250, and 1000 VA. Input 230VAC $\pm 10\%$, 1 Φ , or 208VAC $\pm 10\%$, 1 Φ .) FC1000 (the above changes 50-60 cycles to 60 cycles regulated; capacity 1000 VA. Input 105-125VAC, 1 Φ .)	Input voltage	105-125 VAC, 1 Φ
	Input frequency	50-60 cycles
	Output voltage	115 VAC, 1 Φ , adjustable between 110-120 VAC
	Output frequency	60 and 400 cycles $\pm 10\%$
	Output voltage regulation	$\pm 1.0\%$
	Output frequency regulation	$\pm 1\%$ in standard model $\pm 0.01\%$ with auxiliary frequency standard
	Load range	0.1 to full load
	Distortion	5% maximum
	P. F. range	Down to 0.5 lagging
	Time constant	0.5 seconds
	Envelope modulation	2% maximum

NEW cheap DC POWER SUPPLIES

DUAL OUTPUT (Model 350B)		TUBELESS—GERMANIUM (Model 300G)	
T	105 - 125 VAC, 50 - 60~ , 1 Φ .	Input	0-125 VAC, 1 Φ , 50-60~
PUT	1. 175-350 VDC @ 0-60 Ma simultaneously from two independently adjustable outlets.	Output	0-300 VDC
	2. 175-350 VDC @ 0-120 Ma from one outlet.	Load range	0 - 0.6 amps.
	3. 0-175 VDC @ 0-60 Ma from one outlet.	Ripple	2% at 300 v. to 5% at 100 v.
	4. 6.3 VAC @ 5 amps., C.T., unregulated.	Regulation	No line regulation. $\pm 1.0\%$ with output voltage setting between 100 and 300 VDC with a load change from .06 amperes to 0.6 amperes. Useful performance available at lower output voltages (typical data available upon request).
PUT REG.	$\pm 1.0\%$ max. or 1.5 volts (whichever is greater).	AC output	0-125 VAC @ 115 volts input. 5 ampere capacity. Not available simultaneously with DC output.
PLE	10 mv		
	13" x 7 1/2" x 8"		Mechanical—no meters. Size 12" x 8" x 8".

COAST TO COAST

Authorized Sorenson representatives and their field engineers are listed below. Find the one located nearest you — don't hesitate to call on him for consultation and advice.

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Neely Enterprises
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- CALIFORNIA — LOS ANGELES**
Neely Enterprises
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- CALIFORNIA — SACRAMENTO**
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1317-15th St.; Phone Gilbert 2-8901
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1029 Rosecrans St.; Phone Bayview 8106
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- D.C. — WASHINGTON**
Burlingame Associates — F. L. Horman
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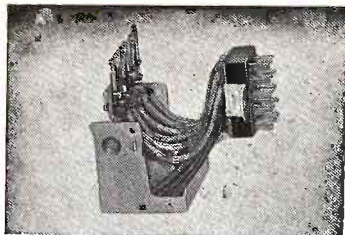


Specify

SORENSEN

SORENSEN AND COMPANY • 375 FAIRFIELD AVE., STAMFORD CONN.

Insulation by IRVINGTON



FLEXIBLE TUBING: Extruded Plastic and Varnished

THE IRVINGTON LINE of insulating tubing includes extruded thermo-plastic and varnished types, for all conductor sizes commonly used in electronic wiring. All are characterized by high dielectric and tensile strength, excellent flexibility, smooth surfaces and resistance to acids, alkalis and fumes.

Application	Recommended Types	Dielectric Strength* (vpm)	Tensile Strength (psi)	Remarks
VHF	Polyethylene	1350	1600	High resistance to ozone
LOW-TEMPERATURE	Hyflex Ivi-Flex Transflex	1000 650 1000	3000 1000 3000	-70°F to 167°F Flexible at -80°F Transparent: -58°F to 167°F
HIGH-TEMPERATURE	Temflex 105	1200	3000	Cont. Oper. at 105°C
GENERAL-PURPOSE	IRV-O-LITE XTE-30	1000	3000	Rubber-like, flexible
	Varnished	IRV-O-VOLT: Tubing—cotton, rayon and glass, varnished inside and out; Sleeving—cotton, rayon and glass, saturated. IRVINGTON: Lacquer-coated cotton, rayon and glass tubing. Special types.		



IRVINGTON INSULATING TAPES and YARD GOODS

*Dry test, .020" wall

Available in a wide range of formulations to meet such electronic requirements as: high dielectric strength; resistance to moisture and heat; flexibility at high and low temperatures. Table lists the more commonly used types; consult our engineering department for special requirements.

Application	Recommended Types	Thicknesses	Dielectric Strength* (vpm)	Tensile Strength lbs/1" width
VHF	Polyethylene	.004-.020		
COMPACT EQUIPMENT	Varnished silk	.002-.008	1700-1100	13
	Varnished rayon	.003-.008	1200-1000	35
	Varnished nylon	.003-.008	1200-1000	25-30
	Varnished cambric	.003-.005	1200	32
	Varnished paper	.00075-.015	2500-500	
HIGH TEMPERATURES	Varnished Fibreglas	.003-.030	1200-600	70-550
	Silicone Varnished Fibreglas	.003-.025	1500-250	100-525
	Fibron	.008-.020	1000-750	40-47
GENERAL-PURPOSE	Varnished cambric (straight cut)	.005-.015	1100-1200	38-50
	Varnished cambric (bias cut)	.005-.015	1100-1300	40-47
SPECIAL APPLICATIONS	Ivi-Bind (pressure-sensitive backing)	.005-.012	1050	38-44

STANDARD WIDTHS AND LENGTHS: Straight cut supplied in 25 and 50 yard rolls. Bias cut supplied in 25 and 50 yard rolls, 36" wide or tapes from 3/8" up. Consult our catalog for detailed dimensions.

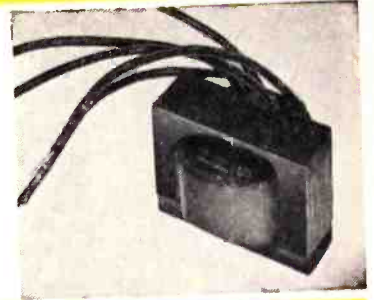
*Avg. short-time test

LOOK TO IRVINGTON FOR
INSULATION LEADERSHIP

Irvington

For Electronic Applications

HARVEL and IRVINGTON Insulating Varnishes



The varnishes listed below represent a few of the many types developed by Irvington for a wide range of uses. All these varnishes offer good-to-excellent resistance to moisture and heat, and most of them also resist the effects of oil, acids and alkalis. Dielectric strength ratings in this table are based on average short-time tests for a film of varnish on paper in the case of baking varnishes; on U.S. Navy Specifications in the case of air drying types.

Method of Drying	Varnish Type	Dielectric Strength (vpm)
INTERNAL BAKING	Harvel 512-C	2100
	Harvel 612-C	2300
	Harvel 912-C	2200
	Irvington 100	2250
	Irvington 200	2100
	Irvington 500	2100
REGULAR BAKING	Harvel 202	2100
	Harvel 602	2100
	Irvington 1	2150
	Irvington 5	2300
	Irvington 121	2400
	Irvington 517	2000
AIR DRYING	Harvel 1301	1650
	Irvington 9	2000

Other Insulation Products

HARVEL OIL STOP

Oil Stop is used as a filling compound for enclosed coils in X-ray machines and other types of electronic equipment. It will not soften under heat in service, and is extremely resistant to the effects of acids, alkalis, water, oils and petroleum products.

WIRE MARKERS

Irvington Wire Markers are made in plastic for quick, positive wiring identification that speeds up original assembly and simplifies maintenance and repair work. Sizes and markings to specification.

PUNCHINGS

Insulating gaskets, washers and other parts can be punched to order from most of the materials in the extensive Irvington insulation line. Dies are on hand for many standard sizes and shapes — special designs can be tooled to specification.



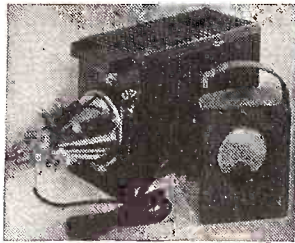
Write for literature on the entire line of Irvington Insulation

VARNISH & INSULATOR CO.

29 Argyle Terrace, Irvington 11, New Jersey

TERMALINE Coaxial Line Instruments

TERMALINE Direct-Reading RF Wattmeters 30 mc-2500 mc; 50 ohms; 1/2w.-5kw.



Model 612

The THERMALINE wattmeter is a direct-reading, absorption type instrument for simple, fast and accurate power measurement of transmitters operating between 30 mc and 2500 mc. With the THERMALINE coaxial load resistor dissipating all power applied, a crystal voltmeter circuit built into the input connector of the wattmeter feeds a dc meter which is calibrated directly in RF watts. Accuracy of 5% of full scale or better is assured. Model 611 is the commercial version of the Army-Navy ME-11/U RF wattmeter, widely used by all government services. Most transmitter manufacturers use the THERMALINE wattmeter for production and field test work and recommend it to maintain performance. Frequency Range... 30 to 2500 mc. (See Table) Power Range 1/2 watt to 5000 watts Impedance 50 ohms Accuracy 5% of full scale. VSWR less than 1.1

STANDARD MODELS

(Standard calibration is 30-500 mc. If 30-1000 mc calibration is desired it must be specified)

Model	Freq. Range	Max. Power	Ranges	Scales	Input Connector	Special Features
611	30-500 mc or 30-1000mc	60 W	2	0-15 0-60	Female N. Takes UG-21/U plug	Same as AN-ME-11/U Portable
612	30-500 mc or 30-1000mc	80 W	2	0-20 0-80	Female N. Takes UG-21/U plug	Portable
67	30-500 mc or 30-1000mc	500 W	3	0-25 0-100 0-500	Coplanar. Adaptor to take UG-21/U plug supplied	Meter is shock mounted in aluminum housing separate from termination
67C	30-500 mc or 30-1000mc	2500 W (Water cooled)	3	0-100 0-500 0-2500	Coplanar. Fittings and cable assys to all flexible & rigid lines available	Tap water cooling is required above 500 watts
824	30-220 mc	5000 W (Water cooled)	1	0-5000W	Coplanar. 10 ft of RG-19/U cable with 1 5/8" fitting is supplied	Water cooling

Engineering models available for use between 500-2500 mc. Special scale Model 61 for low powers such as 0-1, 0-5 watts also available.



TERMALINE-Coaxial Terminations

The Termaline coaxial load resistor is designed to have a constant 50 ohm impedance over a wide frequency range. Its unique design puts reactance to work and produces an almost purely resistive load, with little or no sensitivity to frequency change. The active power dissipating portion is the outer surface of a cylindrical film-type resistor, which forms the center conductor of a special self-terminated co-axial structure. Constant impedance properties depend upon shape of coaxial assembly and distribution of resistance along length of outer surface of resistor.

Major use is as a dummy load for high frequency transmitters. Being non-radiating, adjustment of transmitters can be made without violation of FCC rules. Thousands are now being used in military equipment. It is incorporated as standby in many commercial transmitters and as a test load.

Being non-radiating, adjustment of transmitters can be made without violation of FCC rules. Thousands are now being used in military equipment. It is incorporated as standby in many commercial transmitters and as a test load.

0-11,000 mc

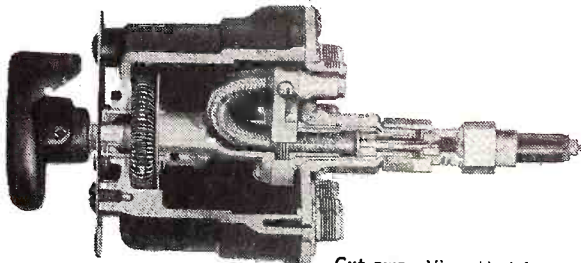
50 ohms 5w.-2500w

Model	Max. Power	Best Freq. Range	VSWR	Input Connector
80-F	5 W	0-11 KMC	1.15	Type N Female
80-M	5 W	0-11 KMC	1.15	Type N Male
80A	20 W	0-500 MC	1.1	Type N Female
81	50 W	0-4 KMC	1.2	Type N Female
81B	80 W	0-4 KMC	1.2	Type N Female
82	500 W*	0-3 KMC	1.2	Coplanar. Adaptor to UG-21/U supplied
82A	500 W	0-3 KMC	1.2	Coplanar. Adaptor to UG-21/U supplied
82C	2500 W**	0-3 KMC	1.2	Coplanar. Fitting and cable assemblies for all flex and rigid lines available

* At max rating fan necessary

** Water cooled

COAXWITCH—Coaxial Selector Switch



Cut-away View Model 74

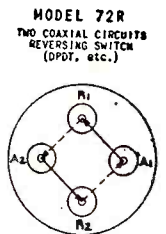
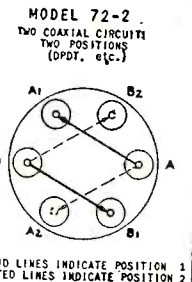
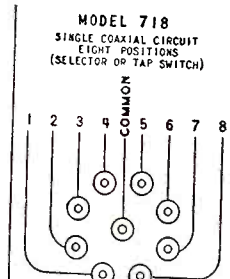
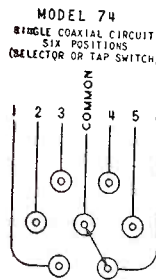
This is a 50 ohm switch for use in coaxial circuits. Characteristic impedance is maintained through all switch details and low standing wave ratios result. In V.S.W.R., switch is comparable and as good as the connectors and cable with which it is used.

LOW PASS RF FILTERS

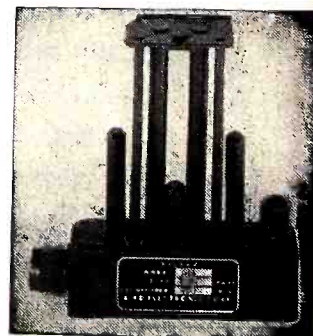
Suppression of low order harmonics in VHF and UHF transmitters may be handled thru use of these filters. Insertion loss and VSWR are very

low thru pass band. Rugged construction thruout assures reliability. All are of 50 ohms impedance and are reversible with equal results. Attenuation in pass band is less than 1/2 db and in stop band 40 db or better is realized.

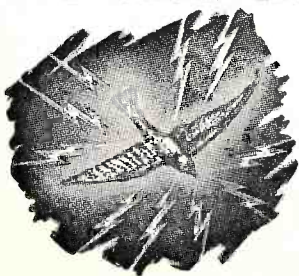
MODEL	PASS BAND	STOP BAND	MAX. POWER	VSWR	CONNECTORS
844	0-400 MC	500-2000 MC	150 W	1.35	One male and one female N
819-1200	0-1200 MC	1900-4000 MC	100 W	2 to 1	Two female N for use with Models 611 and 612
819-7	0-1200 MC	1800-4000 MC	3.5 KW	2 to 1	Coplanar. For use with Models 67 and 67C



Type N female connectors are standard on all models to receive UG-21/U series plugs. Adaptors may be used to enable switch to be used with other cable and connectors.



Model 844



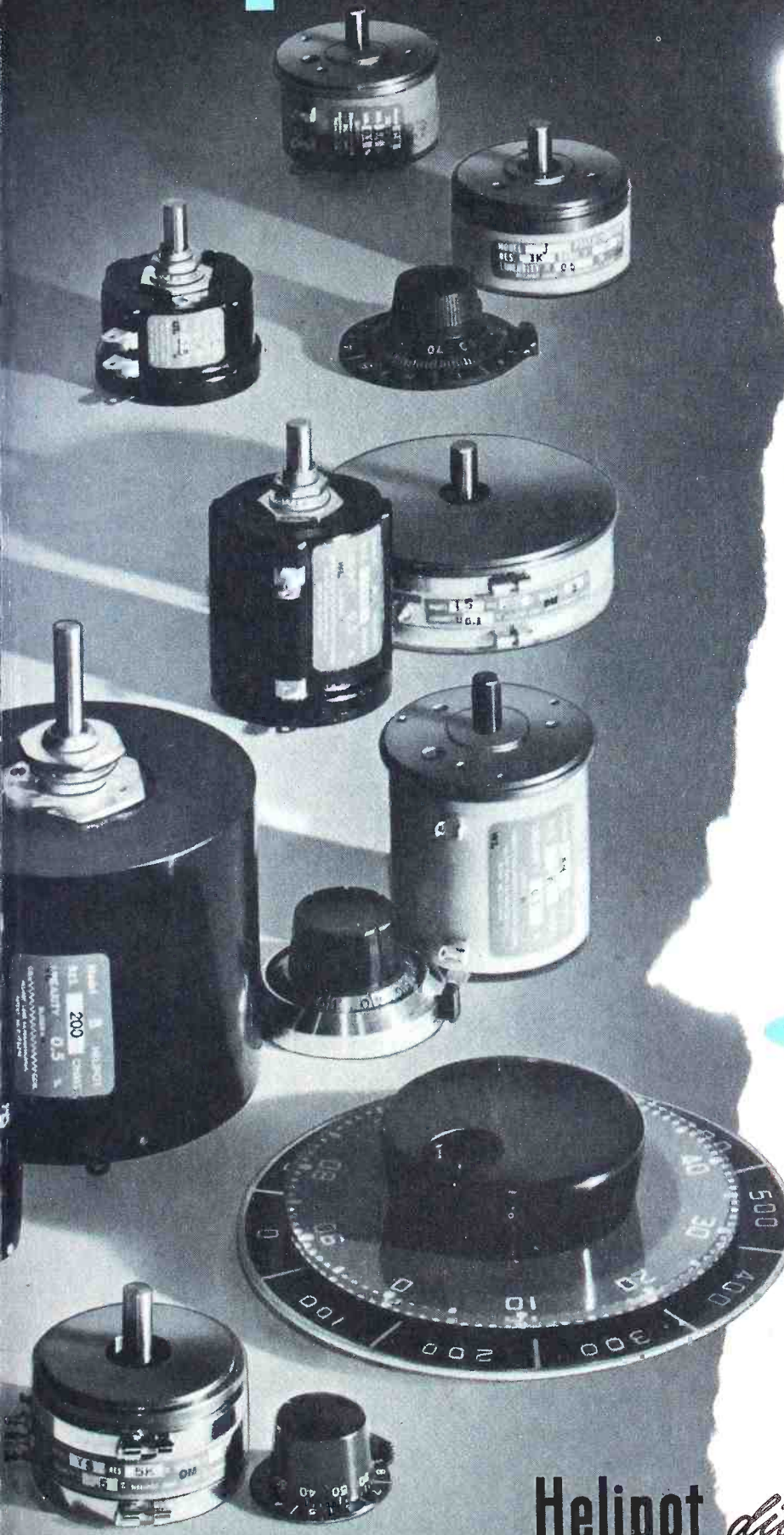
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MULTI-TURN HELIPOTS

Where highest accuracy and greatest resolution is required... especially where space is limited... a multi-turn potentiometer may be the answer. Helipot, originator of the helical potentiometer, makes multi-turn models in a variety of sizes and designs... one for every purpose. Standard models are described in the following pages... and as with every Helipot product, they may be modified to meet your specifications.

SINGLE-TURN HELIPOTS

Where continuous rotation is needed, there is a single-turn Helipot to meet your requirements. In this type, too, Helipot offers a variety of sizes and designs... one styled specifically for each use. See the following pages for characteristics of the several standard models... and bear in mind that our large and expert engineering staff is always happy to work with you, whether your particular use requires an adaptation of a standard Helipot... or an entirely new model.

NON-LINEAR HELIPOTS

There is an increasing number of important applications for potentiometers which have non-linear (functional) characteristics. As with every Helipot product, we offer a variety of mounting arrangements... and an almost unlimited number of non-linear functions may be reproduced. If your use requires a special empirical function... or if it will be met by one of the more common trigonometric functions... Helipot engineers can design the potentiometer best suited to your needs.

DUODIALS

Helipot engineers have designed several models of multiple-turns-indicating Duodials... for use not only with Helipots, but with any multi-turn device. Duodials add distinction to the finest instrument panels... even more important, they provide the high degree of setting accuracy needed to complement the adjustment accuracy of the Helipot.

Not only does Helipot make a wide variety of sizes, styles, and designs... but Helipot's large staff of expert engineers is always happy to work with you in developing models to meet your own individual needs... in adapting standard models to your particular requirements... or in building entirely new types to meet your own special needs.

The various basic types of Helipots and Duodials are described in detail in the following pages... note particularly the wide range of standard models which are carried in stock.

Helipot division

BECKMAN INSTRUMENTS, INC.
SOUTH PASADENA, CALIFORNIA

Plants at South Pasadena, Calif., and Mountainside, N.J.

Representatives in Principal Cities

(See map and listing on following pages)

POT SERIES	A	AJ	AN	B	C	CN	D	E	G	J	L	Y
Number of turns	10	10	10	15	3	3	25	40	1	1	1	1
Length, inches (approx.)	2	.75	2	3.312	2	2	3.312	3-5/16	1.312	2	3	1.75
Length of coil, inches (approx.)	46.5	18	46.5	140	14	14	234	374	3.1	5	8.3	4.6
Weight, oz. (not ganged)	4	1	4	14	2	2.5	18	27	1.5	4	8	3.25
Max. resistance range, ohms (tolerance $\pm 5\%$; see note A)	10 to 300,000	100 to 50,000	100 to 250,000	50 to 500,000	5 to 50,000	30 to 75,000	100 to 750,000	200 to 1,000,000	5 to 25,000	50 to 50,000	10 to 100,000	5 to 75,000
Power rating, watts	5	2	5	10	3	3	13	17	2	4	5	3
Max. voltage (C)	1000	900	1000	1000	1000	1000	1000	1000	400	400	400	400
Electrical rotation	3600^{+4}_{-0}	3600^{+12}_{-0}	3600^{+1}_{-0}	5400^{+4}_{-0}	1080^{+4}_{-1}	1080^{+1}_{-0}	9000^{+4}_{-0}	$14,400^{+4}_{-0}$	$352^{\pm 2}$	$356^{\pm 1}$	$358^{\pm 1}$	$354^{\pm 1}$
Accuracy tolerance, std. (A)	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$	$\pm 0.5\%$
Accuracy tol., best practical	$\pm 0.5\%$ 1K Ω & above	$\pm 0.1\%$ 5K Ω & above	$\pm 0.025\%$ 5K Ω & above	$\pm 0.025\%$ 25K Ω & above	$\pm 0.1\%$ 5K Ω & above	$\pm 0.05\%$ 30K Ω & above	$\pm 0.025\%$ 1K Ω & above	$\pm 0.02\%$ 1K Ω & above	$\pm 0.25\%$ 5K Ω & above	$\pm 0.15\%$ 10K Ω & above	$\pm 0.1\%$ 5K Ω & above	$\pm 0.25\%$ 5K Ω & above
Starting torque, max., oz., in. (per section)	2.0	1.00	1.5	2.75	1.75	1.5	3.5	3.5	0.75	1.25	1.65	1.5
Finishing torque, max., oz., in. (per section)	1.5	.90	1.0	2.00	1.25	1.0	2.5	2.5	0.5	0.5	1.20	0.8
Moment of inertia, rotating parts, gm. cm. ² (per section)	18	0.3	22	200	7.0	7.5	270	400	2.8	14.0	54	2.5
Max. no. ganged sections (B)	3	no ganging	2	3	3	2	no ganging	no ganging	no ganging	8	8	14
Tap distance between taps (B)	20°	45°	20°	15°	20°	20°	15°	15°	36°	15°	10°	18°

(A) Closer tolerances may be obtained on special order.

(B) Sections can be ganged and tap connections added, only during manufacture.

(C) Maximum voltage to be applied regardless of resistance value.

MODELS CARRIED IN STOCK

CATALOG NO.	TOTAL RESISTANCE (OHMS)	WIRE TURNS	WIRE TEMPERATURE COEFFICIENT
-------------	-------------------------	------------	------------------------------

MODEL A

25-AZ	25	2,630	.0008
50-AZ	50	2,871	.0008
100-AZ	100	3,476	.0008
200-AZ	200	4,479	.0008
500-AZ	500	3,550	.00002
1,000-AZ	1,000	5,020	.00002
2,000-AZ	2,000	6,059	.00002
5,000-AZ	5,000	6,855	.00011
10,000-AZ	10,000	8,478	.00011
20,000-AZ	20,000	9,630	.00011
30,000-AZ	30,000	10,834	.00011
50,000-AZ	50,000	12,894	.00011
100,000-AZ	100,000	14,670	.00011
200,000-AZ	200,000	15,920	.00011
300,000-AZ	300,000	16,125	.00002

MODEL AJ

100-AJZ	100	2,600	.0008
500-AJZ	500	2,130	.00002
1,000-AJZ	1,000	2,900	.00002
5,000-AJZ	5,000	3,600	.00011
10,000-AJZ	10,000	3,650	.00011
20,000-AJZ	20,000	4,730	.00011
30,000-AJZ	30,000	5,000	.00002
50,000-AJZ	50,000	6,000	.00002

MODEL B

1,000-BZ	1,000	9,680	.00002
5,000-BZ	5,000	20,400	.00002
10,000-BZ	10,000	16,740	.00011
25,000-BZ	25,000	21,150	.00011
50,000-BZ	50,000	24,050	.00011
100,000-BZ	100,000	32,670	.00011

CATALOG NO.	TOTAL RESISTANCE (OHMS)	WIRE TURNS	WIRE TEMPERATURE COEFFICIENT
-------------	-------------------------	------------	------------------------------

MODEL C

10-CZ	10	1,070	.0008
50-CZ	50	1,390	.0008
100-CZ	100	1,000	.00002
500-CZ	500	1,850	.00002
1,000-CZ	1,000	1,360	.00011
5,000-CZ	5,000	2,480	.00011
10,000-CZ	10,000	3,260	.00011
20,000-CZ	20,000	3,980	.00011
30,000-CZ	30,000	4,410	.00011
50,000-CZ	50,000	4,230	.00011

MODEL G

10-GZ	10	304	.0008
100-GZ	100	370	.00002
500-GZ	500	430	.00011
1,000-GZ	1,000	670	.00011
5,000-GZ	5,000	730	.00011
10,000-GZ	10,000	1,110	.00011
20,000-GZ	20,000	1,333	.00011

MODEL J

100-JZ	100	570	.00002
1,000-JZ	1,000	855	.00011
5,000-JZ	5,000	1,300	.00011
10,000-JZ	10,000	1,610	.00011
20,000-JZ	20,000	1,580	.00011
30,000-JZ	30,000	1,990	.00011
50,000-JZ	50,000	1,750	.00002

CATALOG NO.	TOTAL RESISTANCE (OHMS)	WIRE TURNS	WIRE TEMPERATURE COEFFICIENT
-------------	-------------------------	------------	------------------------------

MODEL LS

100-LSZ	100	725	.0008
500-LSZ	500	1,210	.00002
1,000-LSZ	1,000	1,370	.00011
5,000-LSZ	5,000	2,000	.00011
10,000-LSZ	10,000	2,583	.00011
20,000-LSZ	20,000	2,563	.00011
50,000-LSZ	50,000	2,680	.00002
100,000-LSZ	100,000	4,386	.00002

MODEL YS

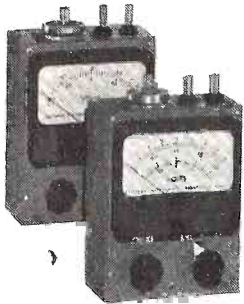
100-YSZ	100	570	.00002
1,000-YSZ	1,000	855	.00011
5,000-YSZ	5,000	1,300	.00011
10,000-YSZ	10,000	1,275	.00011
20,000-YSZ	20,000	1,540	.00002
30,000-YSZ	30,000	1,620	.00002
50,000-YSZ	50,000	2,175	.00002

These units are regularly carried in stock, for immediate delivery, with resistance tolerance $\pm 5\%$...linearity tolerance $\pm 0.5\%$. Closer tolerances... other resistance values... a number of special features... all are available on special order.

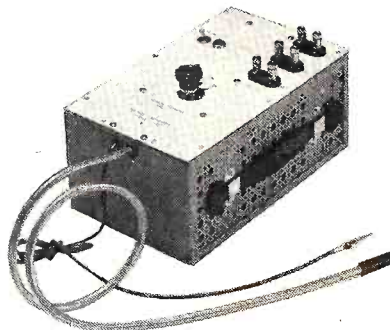
Design details subject to change without notice.
Certified drawings available upon request.

Keithley Instruments

DC Chopper Amplifier handles microvolt signal sources at frequencies of 0 to 200 cps. Drives nearly all recorders, delivers 25ma, develops 80 volts. Features include mechanical chopper operating at 5000 cps, max gain of 800,000, 0.1 megohm input impedance, 25 microvolts input noise (peak to peak), less than 50 microvolts per hour drift, two calibration signals, input bias for suppressed zero, terminals for attenuating output and equalizing recorders. 115 volt, 60 cps power.



Vacuum Tube Electrometer is an unusually versatile self-contained dc voltmeter. With accessories will measure dc potentials from 0.2 to 20,000 volts, currents from 10^{-5} to 10^{-14} ampere, resistances to 10^{16} ohms. Also an extremely sensitive static detector. Accuracy within 2% full scale, grid current within 5×10^{-13} ampere on all ranges, input impedance over 10^{14} ohms.



Phantom Repeater is an instrument amplifier which greatly reduces measuring errors caused by circuit loading. Input impedance is over 200 megohms shunted by 6 mmf. Gains of 1.0, 10, and 100 accurate within 2%, frequency response 5 to over 150,000 cps, output impedance less than 350 ohms, noise equivalent to less than 70 microvolts at the input.



Electronic Wattmeter measures 0.3 to 300 watts on six ranges. Currents .1 to 1 ampere, with external current-coil shunts available for currents up to 30 amperes. Amplifier to potential coil provides 500,000 ohm input impedance to potential circuit, 0.5 ohm in current circuit; response 20 to 3000 cps; accuracy within 2% full scale on all ranges, all frequencies.



Meter Matcher is a power frequency amplifier. Eliminates meter current errors when using a voltmeter or wattmeter. Gives 150-volt voltmeter or wattmeter effective full-scale ranges of 15 to 600 volts. Input impedance 100,000 ohms to 4.0 megohms on five input voltage ranges, max signal 150 volts rms into resistive meter loads of over 2000 ohms; response 5 to 20,000 cps. Adds less than 0.15% error to measurements.

Write for descriptive literature, or phone our nearest representative . . .

ALBUQUERQUE, 31998
 BOSTON, GArison 7-2650
 BRIDGEPORT, 3-2772
 CLEVELAND, PRospect 1-6171
 DALLAS, DIXon 9918
 DAYTON, OREGon 4441
 FORT MEYERS, 5-6762
 HIGH POINT, 3672
 HOLLYWOOD, HOLLYwood 9-6305

HOUSTON, KEystone 1021
 MINNEAPOLIS, Geneva 4078
 MONTREAL, CAN., ATLantic 9441
 NEW YORK, REctor 2-0091
 PHILADELPHIA, Chestnut Hill 8-0892
 ST. LOUIS, SWeetbriar 5584
 SAN FRANCISCO, KLondike 2-2311
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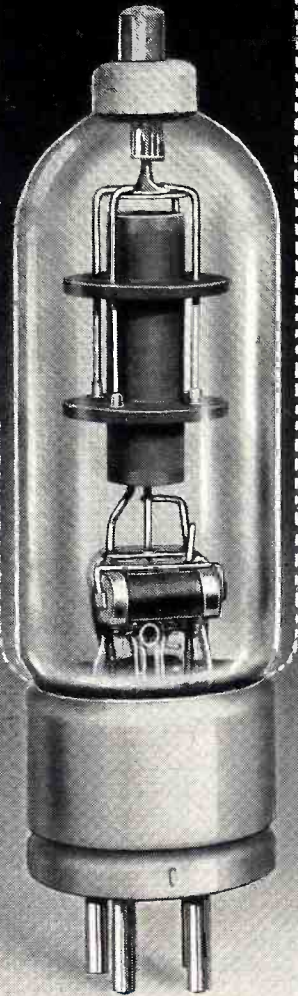
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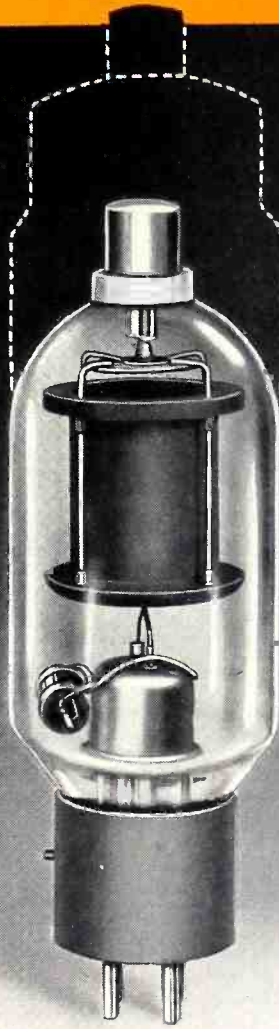
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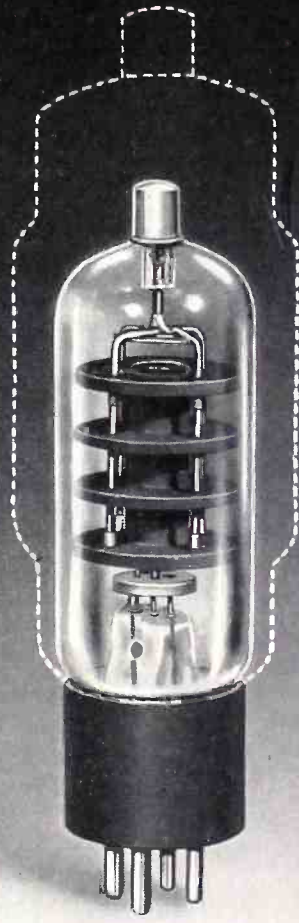
Much Smaller—Same Ratings



TYPE 577
New small version
of 371-B



TYPE 578
New small version
of 8020



TYPE X-22
New small version
of 1616

Illustrations show relative sizes

AIRBORNE radar and other electronic equipment can be made much smaller and lighter by use of these modern, smaller tubes. UNITED has designed types 577, 578 and X-22 as exact elec-

trical replacements for JAN preferred list types 371-B, 8020 and 1616, in applications where space and weight conservation is important.

Write for full specifications.

UNITED  **ELECTRONICS, 42 Spring Street, Newark 2, N. J.**
(TRANSMITTING TUBES EXCLUSIVELY Since 1934)

VACUUM



CAPACITORS



**LOW LOSS,
COPPER ELEMENT
CONSTRUCTION**



Outstanding features of UNITED vacuum capacitors are the employment of large elements and large periphery glass to copper seals, as illustrated. This construction results in a low temperature co-efficient, low R.F. losses and low inherent inductance. End terminals are gold plated to prevent corrosion.

Type designations of UNITED vacuum capacitors symbolize their capacitance ratings and their maximum current and voltage ratings— thus CAP 50/60/35 means:

C
= Capacitance
(50 uuf)

A
= Amperes
(60)

P
= Potential
(35 KV)

The numerals are significant as shown in direct relation to the prefix letters.

When the older types of vacuum condensers were designed, the sole conception of advantage was to attain a voltage breakdown characteristic higher than could be accomplished with condensers of the same physical size with air or other substance as dielectric.

The limitations of the old types of vacuum capacitors resulted principally from high R.F. losses and a high temperature co-efficient. This caused considerable capacitance drift, and the added heat losses in the glass envelope led to external voltage breakdown or internal breakdown due to the liberation of gas. Actual seal puncture in these early type vacuum capacitors was also a frequent cause of failure. Extraneous inductance was caused by the use of conventional ferrous metal rod seals and copper strand leads soldered to the terminal caps, in the old type of construction. The higher the frequency and R.F. power, the more these limitations were accentuated.

All metal parts of UNITED vacuum capacitors are oxygen free, high conductivity copper.

For complete information on UNITED vacuum capacitors, transmitting and special purpose electron tubes write for Catalog 2-GPW.

Type	Capacitance uuf	Maximum Current	Peak R. F. Voltage	Overall Dimensions		Drawing Opposite Page
				Length	Width	
CAP-6/30/20	6	30 amps.	20 KV	3-11/16"	3"	A
CAP-12/30/20	12	30 amps.	20 KV	3-11/16"	3"	A
CAP-25/60/20	25	60 amps.	20 KV	3-11/16"	3"	A
CAP-50/60/20	50	60 amps.	20 KV	3-11/16"	3"	A
CAP-50/60/25	50	60 amps.	25 KV	4-1/2"	2-5/8"	B
CAP-6/30/35	6	30 amps.	35 KV	6-19/32"	2-13/16"	C
CAP-12/30/35	12	30 amps.	35 KV	6-19/32"	2-13/16"	C
CAP-25/60/35	25	60 amps.	35 KV	6-19/32"	2-13/16"	C
CAP-50/60/35	50	60 amps.	35 KV	6-19/32"	2-13/16"	C
CAP-75/60/35	75	60 amps.	35 KV	6-19/32"	2-13/16"	C
CAP-100/60/35	100	60 amps.	35 KV	6-19/32"	2-13/16"	C
CAP-150/60/35	150	60 amps.	35 KV	6-19/32"	2-13/16"	C
CAP-200/60/35	200	60 amps.	35 KV	6-19/32"	3-1/16"	D
CAP-250/60/35	250	60 amps.	35 KV	6-19/32"	3-1/16"	D
CAP-450/60/20	450	60 amps.	20 KV	8-15/32"	3"	E
CAP-500/60/20	500	60 amps.	20 KV	9-7/32"	3"	F

CAPACITY TOLERANCES

All capacitors identified by Drawing A have a capacity tolerance ± 1 mmfd, except CAP-6/30/20 which is ± 0.5 mmfd. All other capacitors listed have capacity tolerance $\pm 2\%$ of rated values.

Above table lists standard sizes. Special sizes can be furnished within capacity and voltage ranges shown, and inquiries are invited.

UNITED ELECTRONICS, 42 Spring Street, Newark 2, N. J.

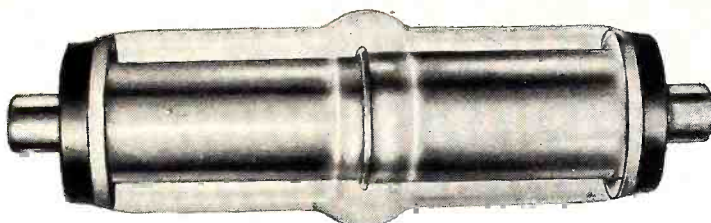
Since 1934

VACUUM



CAPACITORS

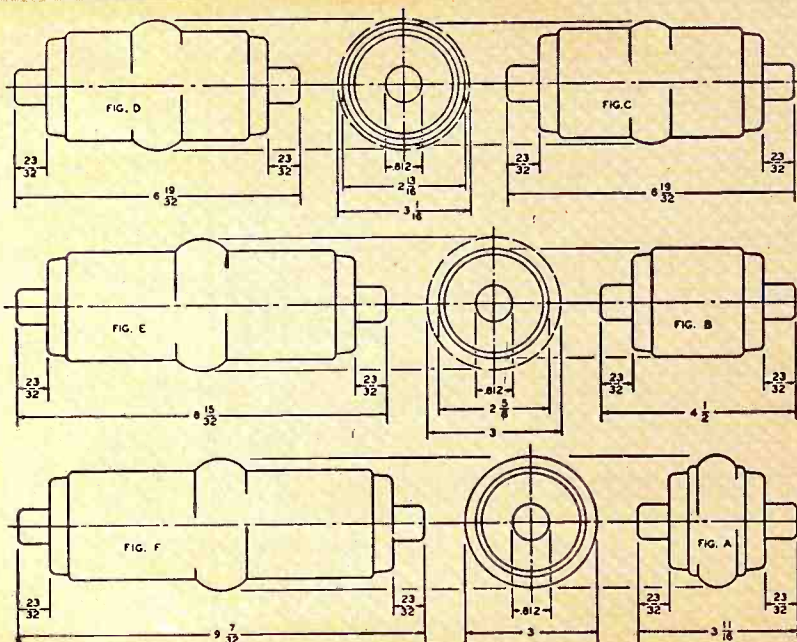
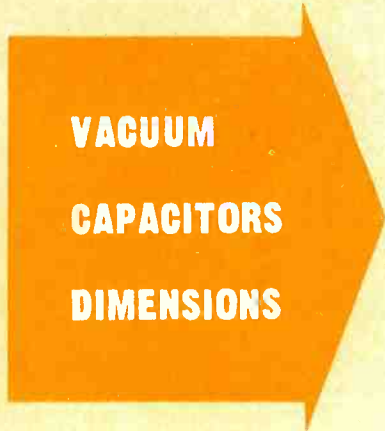
LOW LOSS, COPPER ELEMENT CONSTRUCTION



COMPARISON OF THE VACUUM CAPACITOR WITH THE MICA, OIL, AIR AND PRESSURE TYPES

The present and potential advantages of vacuum capacitors, compared with air, mica, oil and pressure types will be quickly appreciated by a study of the following tabulation. The comparison is based on a unit or combination for each class condenser of 1000 uuf, 30,000 volts rating. Sizes, values, weights and costs shown are approximate.

Size	Vacuum 6 1/2" x 4 1/4"	Air 10 condensers in parallel 14 1/4" x 9 3/4" x 12 1/4" ea.	Mica 4" x 4" x 6"	Oil 3 cond. in series. 15 1/2" x 18" x 5 1/4" ea.	Press. Cond. 12" diam. 30" long
Total Weight	5 lbs.	250 lbs.	10 lbs.	120 lbs.	100 lbs.
Current	100 amps. 30 Mc.	70 amps. 5 Mc. 140 amps. 10 Mc.	20 amps. at 3000 KC	100 amps. at 540 KC	60 amps.
Cost	\$100	\$200	\$100	\$450	\$300
Comparative Characteristics	Completely enclosed, needs no cleaning; self-healing; immune to changes in atmospheric conditions; minimum capacity drift.	Needs frequent cleaning and affected by changes in air pressure and humidity.	Needs no maintenance but is ruined by puncture of insulation.	Relatively high loss but is dependable and self-healing on arc-over.	In case of arc-over may have to be taken apart to clean plates. Requires connection to nitrogen tank and intermittent check on the pressure.



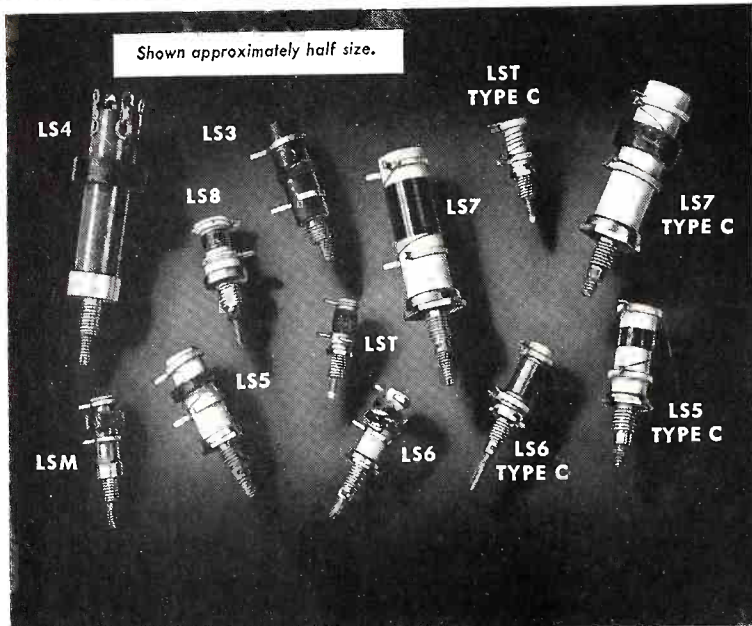
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CTC

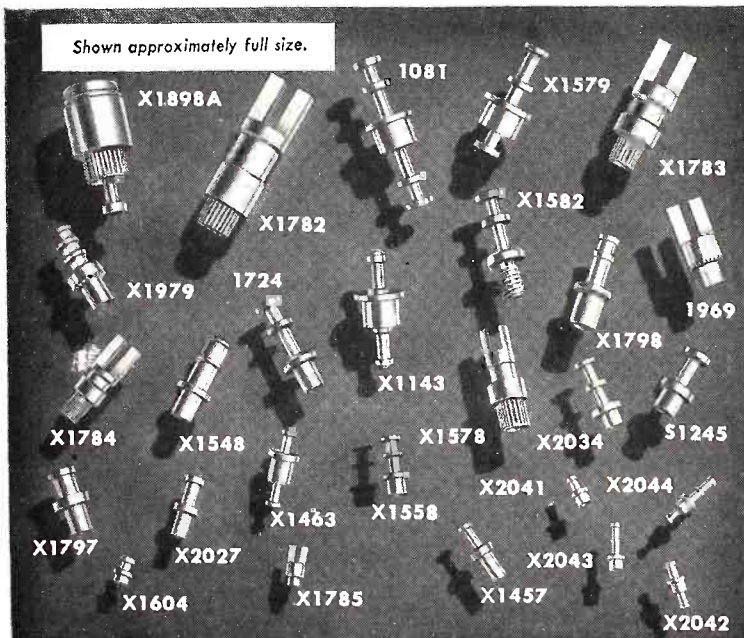
CUSTOM OR STANDARD

...The Guaranteed Components

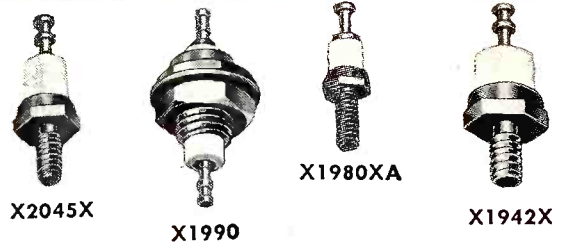
FIND YOUR ELECTRICAL and ELECTRONIC COMPONENTS HERE



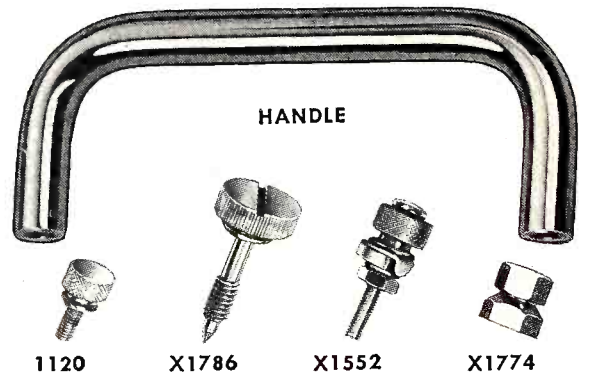
Slug Tuned Coils and Coil Forms. Single layer or pie type windings to your specifications. Forms of quality paper base phenolic or grade L-5 silicone impregnated ceramic. Mounted bushings are cadmium plated brass; ring type terminals are silver plated brass. All units include slugs and mounting hardware. Type C (above) available with retaining collars of silicone fibreglas. Note: Regular, CTC Coil Form Kit is available. Also available, new Coil Kit, Type X2060, with windings on standard LS-6 Forms.



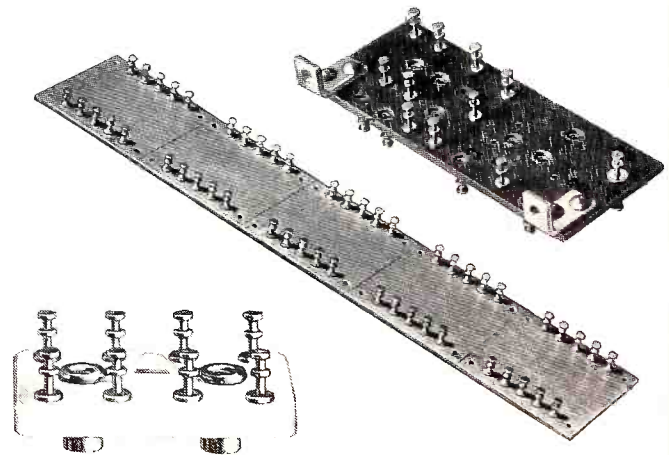
Silver-Plated Brass Standard Terminal Lugs. Twenty-eight different types, each available in varied shank lengths, coated with water dipped lacquer for protection during storage. Other finishes include hot-tin, electro-tin, electro-tin lead, cadmium or gold plate on special order. Pressure and hand swagers available for mounting all terminals. Note: Combination screw and solder terminals are available in 3 sizes.



Insulated Terminals. Grade L-5 ceramic, silicone impregnated for maximum performance over broad humidity range. Rivet or screw stud type. 5 lengths of dielectric. Also available: phenolic in rivet or screw-stud mountings; ceramic with internal screw thread.



Hardware. Includes panel screws, thumb screws, dial locks, shaft locks, handles and handle ferrules, tube clamps, terminal board brackets, standoff mounts and spacers.



Terminal Boards. Standard type in cotton fabric phenolic, nylon phenolic or Grade L-5 silicone impregnated ceramic. Custom boards of cloth, paper, glass laminates (phenolic, melamine or silicone resin) imprinted as required, lacquered or varnished to specifications MIL-V-173 and JAN-T-152.

All materials, processes, finishes meet applicable government specifications.

Custom Made CTC Components will be quickly made to your specifications in production quantity.

Write for Free Catalog #400 containing complete data on the entire CTC line. Includes engineering drawings on items pictured here as well as many other CTC components.

CAMBRIDGE THERMIONIC CORPORATION, 438 CONCORD AVE., CAMBRIDGE 38, MASS.

West Coast Stock Maintained by: E. V. Roberts, 5068 West Washington Blvd., Los Angeles 16, California



KEEP YOUR PRODUCTION ROLLING!

Thin wall 3-core construction assures flux continuity...prevents "dry" joints.

Contains only Virgin tin & lead. Tin - 99.75% pure. Lead - 7.97% pure.

Only Multicore has Ersin Flux - high grade water-white rosin, homogeneously activated.

Non-corrosive even after long exposure to humidity.

Sets metal rapidly due to reduced surface tension.

Vigorous fluxing action.

Leaves only pure rosin after soldering.

Perfect joints on difficult metals & alloys even if oxidized.

Total % flux to solder less than any single core solders.

Rigid quality control insures same standards on every Multicore reel.

Conforms with Q-S-571-b and all other pertinent Federal specifications.



On the Assembly line...time is money!

Save the time lost in producing "rejects"; the time lost with ordinary "slow" solders on difficult metals; the time lost in finding "dry" joints.

Save the time...save the money...the efficiency of your plant...the good name of your product!

In every part of the World, leaders in Electronics are insuring their production efficiency with Multicore.

Nothing less will do...
MULTICORE IS THE WORLD'S FINEST SOLDER!

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LORD MOUNTINGS *Protect* ELECTRONIC EQUIPMENT from VIBRATION and SHOCK DAMAGE



Plate Form Vertical Snubbing Mountings
—isolate steady vibration plus severe shock. Loads up to 610 pounds per mount.



Plate Form Mountings
—Standard—isolate steady vibration. Stable, compact—easily installed. Loads 1/2 to 120 pounds per mount.



Multiplane Mountings
—isolate vibration from all directions. Light in weight, small in size, they are widely used to mount electronic units.



***Temproof Mountings**
—For Airborne Electronic Equipment
• Designed for use with JAN-C-172A cases.
• Exceed AN-E-19 drop test requirements.
• Maintain efficiency from -80° to +250° F.
*Temperature-proof



Meter Mountings—protect small meters and instruments from destructive vibration. One piece construction, easily installed . . . many sizes for most commonly used models.



VIBRATION and shock are natural enemies of electronic equipment and precision instruments . . . To control the damage which these enemies can do, Lord Vibration Control Mountings and Bonded Rubber Parts are used to very profitable advantage. More than a quarter century's experience in dealing with vibration and shock is yours when you take advantage of Lord engineering assistance. The result of such consultation is full protection for electronic units and sensitive instruments by correctly designed and precisely manufactured Lord Mountings and Bonded-Rubber parts.

If You Supply Equipment to The Armed Forces . . . Lord engineers will assist you to select the type of shock and vibration protection which meets the requirements of applicable specifications. As the major supplier of flexible mountings during World War II, Lord's knowledge and experience will enable you to supply approved equipment protection which is economical, efficient and easily installed.

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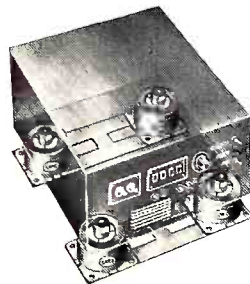
Tube Form Mountings
—Standard—for steady vibration and severe shock. Have great radial stability. Loads from 1/2 to several thousand pounds.



Tube Form Vertical Snubbing Mountings
—isolate steady vibration . . . cushion shock. Good for mobile equipment.



F.H.P. Flexible Couplings—have exceptional torsional flexibility . . . accommodate parallel and angular misalignment. Ratings from 1 fiftieth to 1 hp.

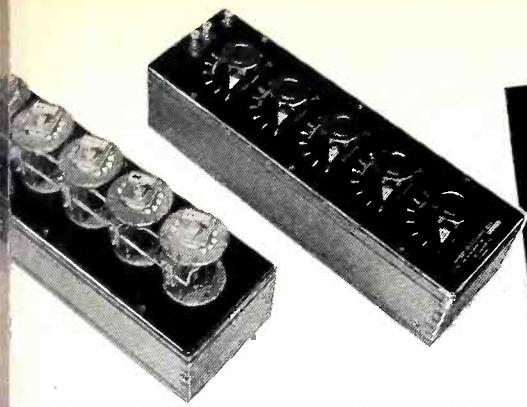


Radiofocal Mounting Bases—Maximum Protection for Airborne Equipment

- Insure protection at steep inclinations.
- Dampers prevent excessive motion.
- Equipment does not sag or droop.
- Made to fit JAN-C-172A cases.



Headquarters for
VIBRATION CONTROL



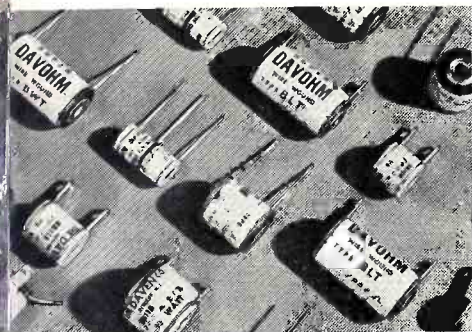
DECADE RESISTANCE BOX TYPE 750

FIRST CALL ON DAVEN

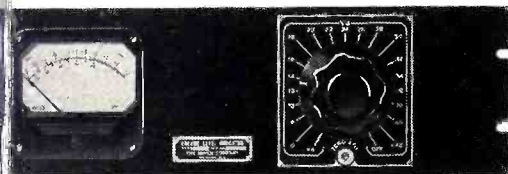
Prime Supplier of Electronic Instruments of Unparalleled Quality, Accuracy and Dependability

In the manufacturing of sensitive, accurate instruments, the reputation of the Daven organization is world wide. For substantially more than a generation, specialization in electronics, coupled with unexcelled development and engineering personnel, has thrust the Daven Company far in the forefront of producers of instruments of notable quality.

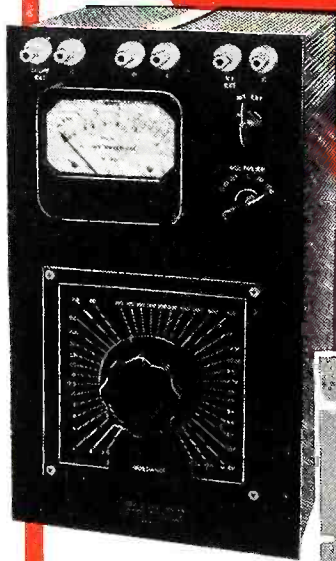
Shown on this page is only a small part of the Daven line. When writing for more complete information on the units illustrated, please identify by name and model number.



PRECISION WIRE WOUND RESISTORS



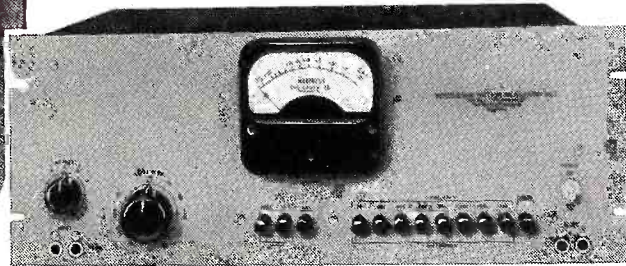
VOLUME LEVEL INDICATOR SERIES 910-911



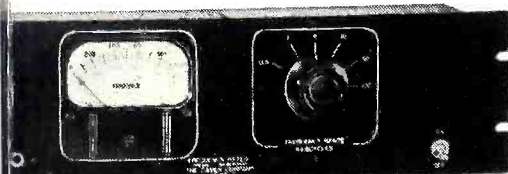
OUTPUT POWER METER TYPE OP-962



RF ATTENUATION BOX TYPE 650



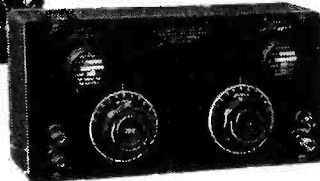
DISTORTION & NOISE METER TYPE 35-A



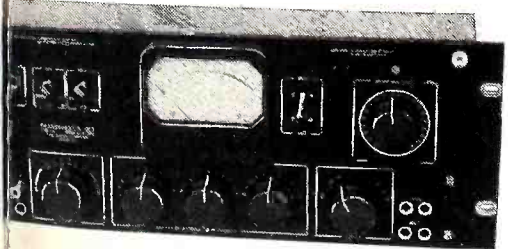
FREQUENCY METER TYPE 838A



ATTENUATION BOX SERIES 690



Precision equipment demands the finest components. Always specify Daven Attenuators.



GAIN SET TYPE 11A

THE DAVEN CO.

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Standard Piezo...

SYNONYMOUS with *Quality*

In crystals "precisioneered" by Standard Piezo Company, only the finest grade Brazilian quartz obtainable is used. In the processing of blanks towards completed crystal units, constant attention is given to all the little details which contribute to a quality product. This is done by means of a system of inspection and quality control developed through years of experience. These are but a few of the factors which have kept Standard Piezo at the forefront of the industry.

Write today for our attractive catalog which completely illustrates and describes each item in the Standard Piezo line. Standard Piezo Company welcomes inquiries, not only for catalog items but for any special application which you may require.



Standard Piezo
COMPANY
CARLISLE, PENNA.



TYPE 1

1,000—12,500 KC



Compact units for transceiver equipment enclosed in an extruded aluminum shield, making it dust proof and resistant to rough treatment. Fixed air gap mounting of the crystal gives stability under vibration and shock. CAA type certified in frequency range 1,200 kc to 10,000 kc. Type 1a furnished with one quartz crystal. Type 1b furnished with one quartz crystal and heater thermostat unit. Type 1d furnished with two quartz crystals but no heater and thermostat combination.

TYPE 20

160 KC to 100 MC



A highly stable, plated, crystal unit, hermetically sealed in a container filled with dry nitrogen. It is the ideal unit for applications where space and weight are a prime consideration and where it is desirable to cover a large frequency range in a given holder. Specially designed mounting gives excellent vibration and shock results. CAA type certified in the frequency range 1 mc to 50 mc.

TYPE 16P

200—20,000 KC



This unit consists of a plated crystal, mounted in a gasket sealed phenolic holder. Designed to operate under conditions where vibration and shock are present. CAA type certified at 200 kc.

TYPE 7

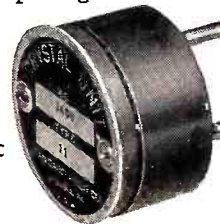
1,750—12,500 KC



Heavy duty holder of molded phenolic with finger pull top and equipped with banana plugs. Pressure mounted unit with gasket sealed holder openings.

TYPE 11

2,250—12,500 KC



This unit is designed to give optimum operation and accurate performance under difficult conditions. It has a variable pressure spring permitting slight frequency adjustments. The unit may be supplied with a fixed air gap, pressure mounted crystal if so desired. This unit is recommended for mobile, marine, and other portable frequency control applications.

TYPE 40

This is a temperature controlled oven accommodating one or two of the type 20 crystal units. Normal operating temperature is 75° ± 5° C with the ambient of -55 to 70° C. Oven draws approximately .9 ampere at 6.3 heater volts.



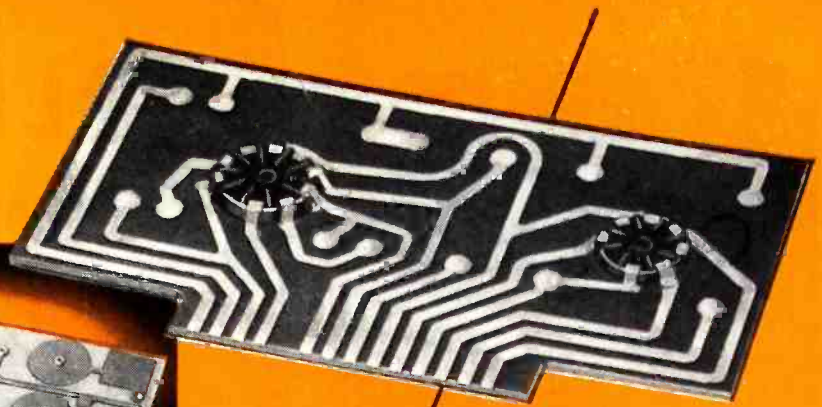
TYPE 9K

100—7,000 KC



This unit has a precision heater and thermostat to maintain constant temperature control. Heater voltages of either 6, 10, 12, or 15 volts are available. Oven temperature normally set to 55° C.

Q. WHY WIRE?



**A. Cut
Production
Costs**

with "photocircuits PRINTED CIRCUITS" and Dip-Soldered Electronic Sub-Assemblies

CREATE competitive **PROFIT** advantages through lower wiring costs, reduced assembly time, exact reproducibility of circuits, improved reliability, and miniaturization!

Here are a few answers to questions asked about Photocircuits Printed Circuits:

Q. How much less cost?

A. Reductions to over 50% in wiring costs alone have been experienced by manufacturers.

Q. How few "printed circuits" can be bought profitably?

A. As few as 10 circuits are frequently used with profit.

Q. What "printing" methods are used?

A. Any of several well-known printing processes can be used... of which photography, silk screening and

offset printing are a few.

Q. Can "cross through" connections on 2-sided printed circuit chassis be made?

A. Yes, by electroplating... to eliminate costly hardware and assembly time... and to assure greater reliability.

Q. What applications are most generally suited for Photocircuits Printed Circuits?

A. Applications extend to Micro-wave plumbing, Radio and TV chassis, I.F. strips, Antenna filters, Terminal boards, Wiping switches, Flush commutators etc.

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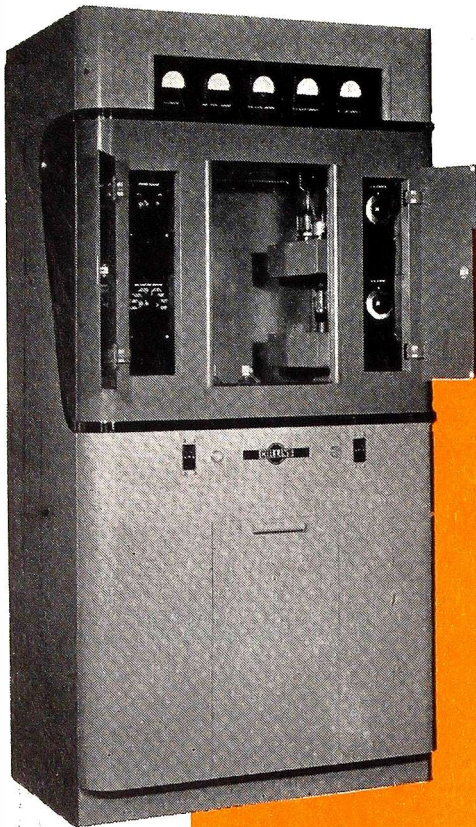
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COLLINS RADIO

BROADCASTING • AMATEUR

PRECISION RADIO EQUIPMENT

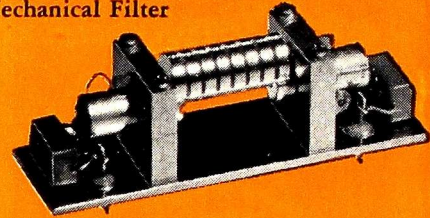


Collins 300J 250 Watt Broadcast Transmitter

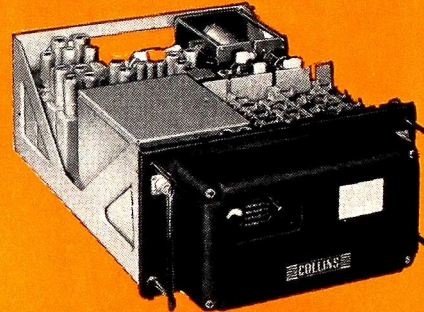
32V-3 Amateur Transmitter



Collins New Mechanical Filter



Collins 75A-3 Amateur Receiver



Collins 618S 144-Channel HF Transceiver

BROADCAST TRANSMITTERS

AM

300J	250/100 watts
20V	1000/500 watts
21E	5000/1000 watts
21M	10,000/5000 watts

SPEECH EQUIPMENT AND ACCESSORIES

Collins complete line for AM and FM broadcasting is listed in the new *Collins Speech Equipment Catalog*. It pictures and describes a wide variety of high quality speech input consoles, remote equipment, rack mounted audio units, test and control apparatus, transducers, power supplies, meter and jack panels, terminal boards, cabinets — everything needed in building a new station or modernizing an old one. *Collins Speech Equipment Catalog* should be kept in the files of all broadcast engineers as a standard reference work. Your nearest Collins office will be glad to supply a copy to your station upon request.

AMATEUR EQUIPMENT

75A-3 Receiver incorporates the new Collins Mechanical Filter — a new concept in receiver performance. Either 3 kc or 800 cycle bandwidth selected by a front-panel switch. AM signals can be tuned to accept the carrier and either one of the sidebands at will while the other sideband is rejected. Ideal for reception of single sideband signals. It is an extremely stable double conversion superheterodyne receiver, covering the 160, 80, 40, 20, 15, 11 and 10 meter bands. Permeability tuned; crystal controlled h-f oscillator; dial calibrated directly in frequency; extremely sensitive with great tuning accuracy and high signal to noise ratio; 50 db image rejection on all bands; automatic noise limiter; amplified, delayed AVC with quick recovery; miniature tubes.

Price including 3 kc mechanical filter, less speaker... \$530.00
10" speaker in matching cabinet... 20.00

KW-1 Transmitter, one kilowatt input AM phone and CW; covers 160, 80, 40, 20, 15, 11 and 10 meter bands; designed to avoid TVI with additional attenuation in the antenna network and filtered control leads; completely shielded r-f assembly; usual excellent Collins audio with speech clipper and high level low pass filter for bandwidth limitation; single control exciter tuning; single bandwidth switch for entire transmitter; tuning dial similar to 75A-3; output 50 ohms (2.5 to 1 standing wave ratio); PA tubes conservatively operated at one kilowatt. Price... \$3,850.00

32V-3 Transmitter, 150 watts input CW, 120 watts phone; Collins 70E-8A VFO controlled, handswitching, gang tuned; designed for maximum reduction of TVI by means of added tuned circuits in the exciter and an added L section in the unbalanced pi output network plus double shielding and filtering of essential leads. Price... \$775.00

35C-2 Low Pass Filter inserted in well shielded transmission line from 32V-1, 2, or 3, provides approximately 75 db attenuation of harmonic emissions at the television frequencies. Price... \$40.00

INDUSTRIAL COMPONENTS

Autotune, a Collins patented automatic rotary positioning device used for accurate remote control of communication receivers and transmitters by means of adjustable positions. It can also be used for the control of many types of industrial equipment.

Autopositioner, a mechanism which will set a shaft accurately to any one of several fixed positions by remote control. It is fast and quiet and is built for long service.

Instrument Type Motors, high efficiency hysteresis type motors are available in both 1" and 2" frame sizes for special applications to airborne and ground communication transmitters and receivers.

Mechanical Filter gives a close approach to the ideal rectangular selectivity curve by using resonant mechanical elements, rather than tuned electrical circuits. Many operating frequencies and band widths are available. When used in a receiver's IF strip, the carrier and one sideband of an AM signal can be accepted while the other sideband is rejected. 3 kc bandwidth filter is ideal for AM or SSB.

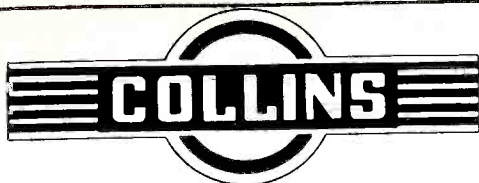
AVIATION EQUIPMENT

618S 144-Channel HF Transceiver, 100 watt power output on 144 crystal controlled channels. Automatically tuned elements insure maximum flexibility and high power output.

51R-3 VHF Receiver, for navigational use of the omnidirectional range.

17L-3 180-Channel VHF Airborne Transmitter, frequency range 118.0 to 135.9 megacycles. All 180 channels easily selected on a simple, positive remote control system. Power output conservatively rated at 8 watts.

51V-2 Glide Slope Receiver, designed for reception of 90/150 cps tone modulated glide slope signals on any of the twenty channels in the UHF range.



**AVIATION • COMMUNICATIONS
FOR EVERY RADIO REQUIREMENT**

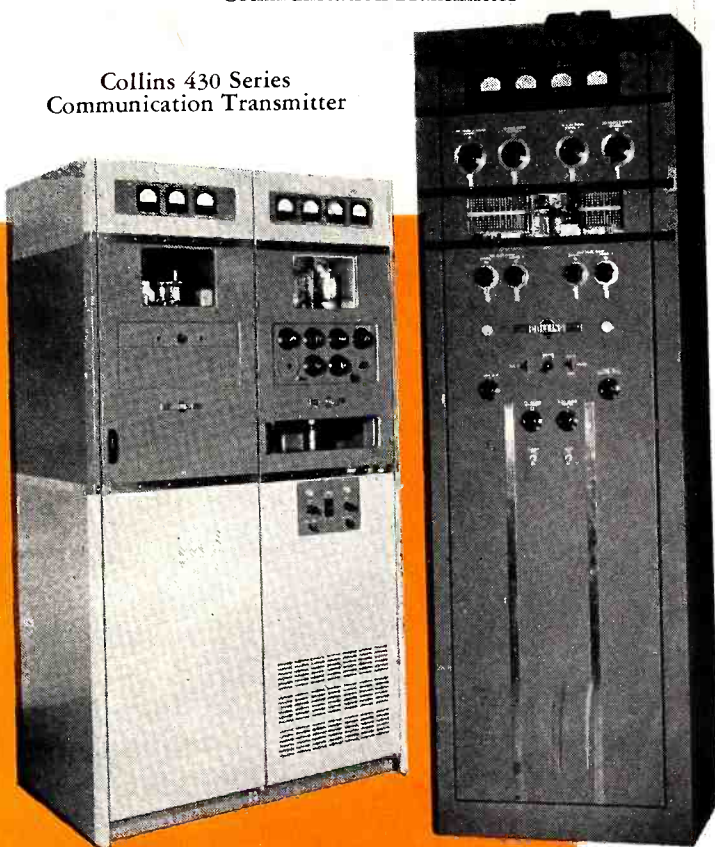


Collins 51V-2 Glide Slope Receiver, Approach Horizon, and Course Indicator



Collins 30K-5 2-Channel Communication Transmitter

Collins 430 Series Communication Transmitter



17M 360-Channel VHF Airborne Transmitter, full 360 channels in the range of 118.0-135.9 mc. 50 watt power output with phone emission. Meets ARINC Spec. #520.

51X 360-Channel VHF Airborne Communications Receiver companion to 17M Transmitter. Complete new design to meet ARINC Spec. #520 for 50 kc bandwidth. Has the sensitivity, selectivity and spurious response rejection characteristics required for flight and airport traffic control.

51Z Marker Beacon Receiver is completely dependable, highly selective and free from spurious response. Operates lights with minimum "twilight" indication.

37J-3 VHF Airborne Navigation Antenna, for use with the 51R-3 navigation receiver. Drag, 2.63 pounds at 250 m.p.h.

37R-1 VHF Airborne Communication Antenna, for use with Collins VHF two-way communications system.

37P Airborne Glide Slope Antenna mounts on nose of aircraft, and provides greatly improved pickup and receiver performance.

Integrated Flight System simplifies ILS approaches by presenting precisely computed steering information in conjunction with simplified pictorial type instruments. Instrumentation also simplifies enroute navigation.

Navigation System, the Collins NC-101, provides the pilot continuous position information by automatically computed triangulation, using two VOR systems.

478C IFS Test Equipment, bench tester for IFS Computer, automatic pilots and other flight director equipments.

479T-2 Signal Generator, a precise ramp-test equipment for airborne VOR localizer and glide slope receivers.

479S-3 Audio Signal Generator is used in precision bench testing of omni-range, localizer and glide slope receivers. Output signals for VOR, localizer, and glide slope audio circuit investigations are provided.

GROUND STATION EQUIPMENT

231D-20 Autotune Transmitter, frequency range 3-26 mc. 2.5 to 3 kilowatts phone; 5 kilowatts CW.

430 Series Transmitters, 1 or 2 kilowatts, conservatively rated, phone, CW or FSK. Simultaneous transmission on two or more frequencies if desired. Transmission on any of ten instantly selectable, pre-set channels over entire range from 2-30 mc. Unitized chassis construction combines production economies with custom requirements.

16F-14 Autotune Transmitter, frequency range 2-20 mc. 300 watts phone. 500 watts CW.

30K-4 Transmitter, 2 channels, pretuned to any frequency between 2 and 30 mc. 300 watts CW. 250 watts phone.

32RA-9 Transmitter, 4 channels, pretuned to any frequency between 1.5 and 15 mc. 75 watts CW. 50 watts phone.

51J-3 Receiver provides continuous coverage from 500 kc to 30 mc, with very high stability and tuning accuracy.

51M-6 VHF Rack Mounting Receiver, single channel, pretuned to any frequency between 118 and 136 mc.

51N-2 Receiver, single channel, for A1, A2, and A3 reception, pretuned to any frequency between 2 and 24 mc. Mechanical filter kits available.

242F VHF Transmitter, rack mounted, providing single frequency operation between 118.0 and 136.0 mcs. 50 watts power into 52 ohms.

In requesting complete technical information on any Collins product please specify equipment type number.

For Engineering Excellence in Radio Equipment, it's . . .



COLLINS RADIO COMPANY, Cedar Rapids, Iowa

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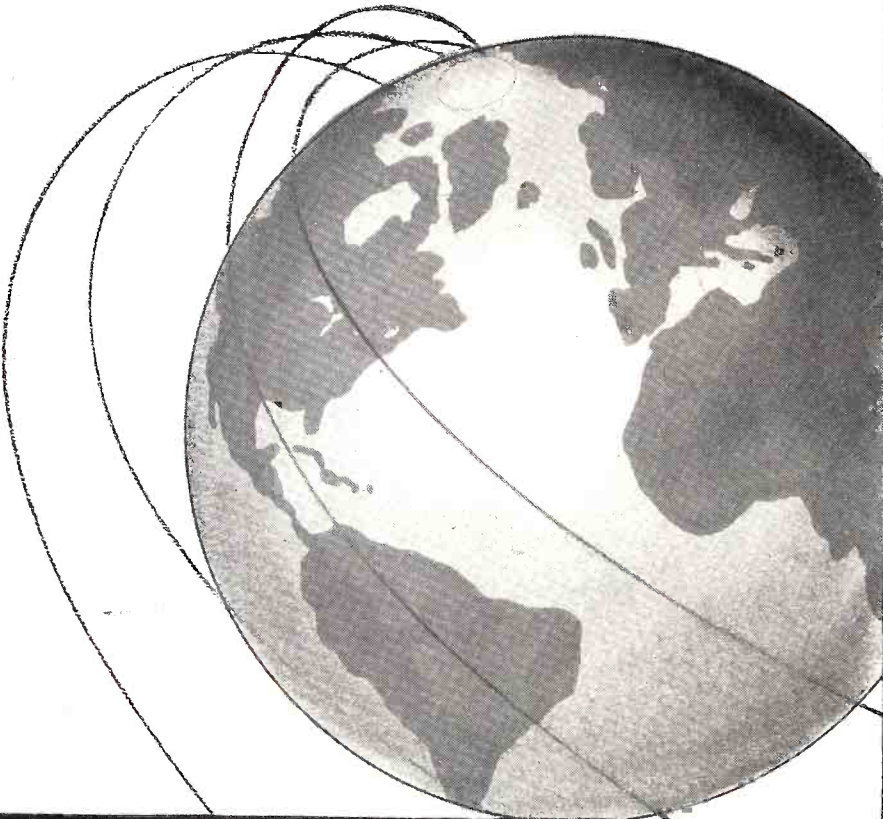
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Behind these products is an able staff of electronic engineers, and a modern laboratory with extensive facilities for research and development, equipped with production tools of the latest design.

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NATIONAL VULCANIZED FIBRE

...contributes to an improved product—
copper-clad Peerless Capacitors for Bendix Radios

These copper-clad Peerless capacitors are used by the Bendix Radio Division, Bendix Aviation Corp., on the voice coil circuit and power input lead of their automobile radios. The capacitor is a combination of Peerless Insulation .004 inch thick copper-clad on both sides with .00135 inch copper foil. Punched clean, Ohmeter tests indicate no shorts between the copper foil surfaces. A minimum capacitance of 200 mmf is obtained.

This practical use of Peerless Insulation, a paper-thin grade of National Vulcanized Fibre, is typical of the countless contributions made by *the material of a million uses*—National Vulcanized Fibre—to business and industry.

National's Peerless Insulation was the *first* fish paper and has been accepted as standard ever since. It is smooth, strong and has excellent forming qualities. Write for detailed literature and engineering service information—

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Since 1873

National Laminated Plastics
nationally known—nationally accepted



Peerless Insulation, possessing high dielectric strength plus excellent rigidity, is copper-clad on both sides to make these capacitors. The punched parts, selling for approximately 7/10 of one cent, replace commercial types of capacitors costing five or six cents.

SEE NEXT PAGE

n a t i o n a l LAMINATED PLASTICS

for the development of
economical, efficient products



The first laminated plastic, National Vulcanized Fibre, has been used broadly for more than seventy years in many industries. As an insulation material, it helped the electrical industry emerge from its embryonic stage into a full-fledged

economic necessity, broadening the avenues of all economic enterprise. Today, National Vulcanized Fibre and Phenolite, laminated plastic, reach into all industry with thousands of applications; help create more efficient products.

A tough, hornlike material possessing excellent electrical properties and great mechanical strength. It is a converted cotton cellulose, which is chemically changed into a new structural form, having high dielectric strength, excellent machinability, good forming qualities, great resistance to wear and abrasion, long life and light weight. Sheets, rods, tubes, special shapes.

A laminated plastic, bonded into its primary forms, sheets, rods, and tubes, under heat and pressure. It has an unusual combination of properties . . . a good electrical insulator, great mechanical strength, high resistance to moisture; ready machinability. Standard colors are natural, black, and chocolate; mirror, semi-gloss, and dull finishes. Sheets, rods, tubes, special shapes.

The first fish paper—developed for electrical insulation and accepted by the industry because it is strong, smooth, flexible and has excellent forming qualities. It is uniform in thickness; has high dielectric strength. Made in sheets, rolls, and coils in all practical width and thicknesses.

WAREHOUSE STOCKS AND FABRICATING FACILITIES

National Vulcanized Fibre and Phenolite in their primary forms are distributed to our sales and fabricating plants and warehouses throughout the country—selected as to render efficient service to the large industrial sections of the United States and Canada. These strategically located warehouses for stocking the standard forms of National Vulcanized Fibre and Phenolite in stock are located in Wilmington, Chicago, Boston, New York, San Francisco, Los Angeles, Seattle, and Toronto, Ontario.

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FIBRE

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Laminated PLASTIC

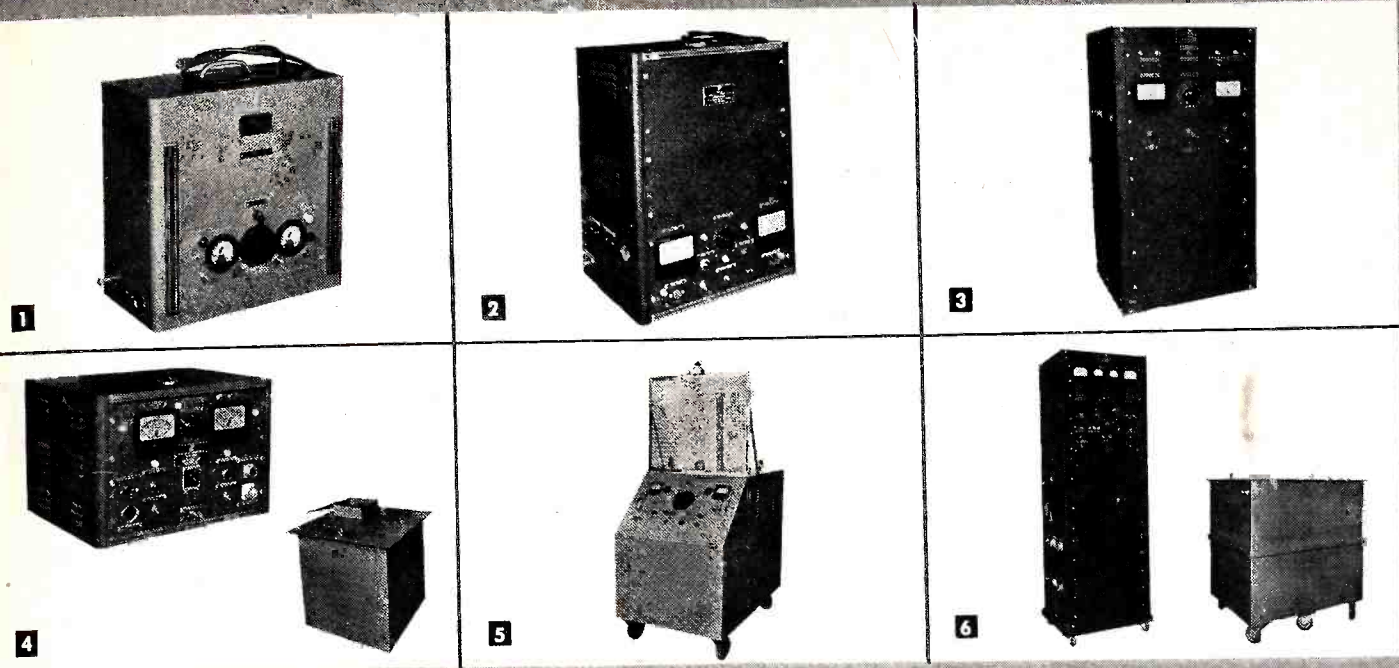
PEERLESS
INSULATION

Experimental service is offered from our research laboratories. National Service Engineers will, without obligation, assist you in employing National Laminated Plastics to your best advantage.

NATIONAL VULCANIZED FIBRE CO.

WILMINGTON • DELAWARE





Beta

- The complete line of high voltage power supplies

Over 120 Standard Designs...
 Ranges from 0-300 to over 300,000 Volts

Beta-Built equipment incorporates proved design features to assure long service life and dependable operation. Beta's experience in the manufacture of power supplies enables our organization to provide superior equipment at lower cost than "shop-built" supplies with the certainty that the requirements of the installation are met. Important, too, is the consulting

service provided by Beta Engineering Representatives to assist you in selecting the appropriate design for your requirements. Whether you require a stock design or special equipment, their services are available without obligation.

Write for detailed information on Beta-Built High Voltage Power Supplies—or for information on a specific problem.

Six Typical Designs

- 1 Model 201
0-30 KV, 2 MA, unregulated. Positive, negative or reversible polarity. Fully portable.
- 2 Model 224
0-40 KV, 2 MA, unregulated. Positive, negative or reversible polarity.
- 3 Model 2008
0-50 KV, 2 MA, unregulated. Positive, negative or reversible polarity.
- 4 Model 217
0-100 KV, 2 or 5 MA, unregulated. Positive, negative or reversible polarity.
- 5 Series 2047
D-C Overpotential Testers. Up to 120 KV and up to 5 MA ratings. Sharp overload cutoff characteristic. Line voltage stabilized.
- 6 Model 213
0-250 KV Cockroft-Walton Generators. Up to 5 MA. Unregulated or regulated. Positive, negative or reversible polarity.

Beta Electric Corporation
 333 East 103rd Street, New York 29, N. Y.

Engineering Representatives

- Northeast Area — Burlingame Associates, 103 Lafayette St., New York 13, N. Y.
- Ohio Tri-State Area — Allan Nace, Brecksville, Ohio
- Michigan — The Satullo Co., 7635 East Jefferson, Detroit 14, Michigan
- Midwest Area — Everett Associates, 6744 N. California Ave., Chicago 45, Ill.
- Southwest Area — Earl Lipscomb and Associates, 3561 Marquette St., P.O. Box 8042, Dallas, Texas
- California and Arizona — E. V. Roberts and Associates, 5068 W. Washington Blvd., Los Angeles 16, Calif.
- Northwest Area — Hawthorne Electronics, 700 S.E. Hawthorne Blvd., Portland 14, Ore.
- Canada — Stark Electronics, Ajax, Ontario, Canada
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Specify

"MAKEPEACE"

for

PRECISION RINGS

DEMCO collector rings and ring assemblies give you these advantages . . .

ECONOMY . . . laminated construction provides contact metal where required . . . base metal for strength.

HIGH FINISH . . . on contact surface for long wear and noise-free operation.

PRECISION MADE . . . it is unnecessary to add further machine operations.

COMPLETE . . . rotor or pancake type multi-ring and ring-and-brush assemblies supplied.

PRECISION TUBING

PRECISION DRAWN . . . ID held as close as $\pm .001$. Solid coin silver, brass or aluminum Rev. MIL-T-85.

LAMINATED SILVER . . . on ID for

- Low attenuation
- Corrosion resistance
- Highest mirror finish

Laminated silver ID and OD for round tuned lines.

PRECISION "KNOW-HOW"

With nearly sixty years of experience in the production of both laminated and solid precious metals, MAKEPEACE is today an accepted "headquarters" for the many special precious metal products and assemblies called for in the electronic field.

Our staff of thoroughly experienced design and production engineers and metallurgists . . . as well as our research and testing laboratory . . . are all at your service.

Your inquiries are cordially invited and will receive our prompt and interested attention.

D. E. MAKEPEACE COMPANY

DIVISION OF

UNION PLATE AND WIRE COMPANY

Laminated and Solid Precious Metals • Base Metal Tubing drawn to Special Tolerances • Precision Sendzimir Sheet Metal Rolling • Contact Parts and Materials — Electronic Assemblies • Silver Solders

MAIN OFFICE AND PLANT, ATTLEBORO, MASSACHUSETTS
SALES OFFICES: NEW YORK, CHICAGO, LOS ANGELES, COLUMBUS, O.

THE STANDARD OF QUALITY

HICKOK
INSTRUMENTS

FOR OVER FORTY-THREE YEARS

Laboratory

TUBE TESTER

Engineer's Portable

Designed with professional accuracy for engineers in the radio, television, aviation, communication and industrial fields. Tests all tubes normally encountered in electronic work. Provides increased accuracy for testing high gain type tubes. Permits choice of 3 AC signals. Adjustable DC bias, metered to within 1% giving highest accuracy of the tube performance test. 8 other models available.

Model 539A

type tubes. Permits choice of 3 AC signals. Adjustable DC bias, metered to within 1% giving highest accuracy of the tube performance test. 8 other models available.

Capacitance **METER**
and **TRUE VTVM**

An accurate multi-purpose instrument for laboratory and industrial use. Measures wide ranges of inductance, capacitance, resistance; current and voltages, both AC and DC. Built with 9 inch Zero-Center scale. Matched high frequency probe is included to make this instrument a True VTVM. Peak-to-peak or RMS. Useful to 300 MC. DC probe is available to extend range to 30,000 volts.

Model 209A

frequency probe is included to make this instrument a True VTVM. Peak-to-peak or RMS. Useful to 300 MC. DC probe is available to extend range to 30,000 volts.

Microvolt

SIGNAL GENERATOR

125 KC to 120 MC and 150 to 220 MC on fundamentals

An accurate microvolt signal generator that meets the needs of such high-frequency users as police, fire dept. and military as well as industrial laboratories. Calibrated output from 0.5 to 100,000 microvolts. Also available: 292XAL with continuous coverage. 125KC to 165MC on fundamentals.

Model 292X

100,000 microvolts. Also available: 292XAL with continuous coverage. 125KC to 165MC on fundamentals.

5" Oscilloscope

An outstandingly versatile 'scope designed for general purpose industrial laboratory and television applications. Both driven and recurrent sweep. Wide band amplifier: Frequency response DC, 0-4.5 MC, down 3 db. 17 M. V. per inch sensitivity.

Model 640

Calibrating voltages, triggered sweep, provision for Z-axis modulation, combination light shield, and camera base are provided. Stable, shielded and shock mounted. Three other models are available.

Write for technical details on the complete HICKOK Test Equipment line.

Electrical

INDICATING METERS



For over 43 years HICKOK has pioneered, developed, and improved electrical indicating instruments. Today, HICKOK manufacturers meters of all classes ranging from the most accurate laboratory types with an accuracy of 0.2% of full scale deflection on down to small pocket portable types with an accuracy of 1 1/2%.

A complete line of switchboard types for use on electrical and power switchboards are available in 6" square, 6" round, horizontal edgewise, and up to the very large 14" with an accuracy of 1% or better. Provided in all AC and DC ranges including amperes, volts, watts, frequency, power factor, etc.

A very complete line of panel meters in both round and square types from 2 1/2" to 9" are also available in the popular microammeter, ammeter, voltmeter, wattmeter, etc. This panel meter line is exceptionally complete and includes the very latest ruggedized types to meet military specifications.

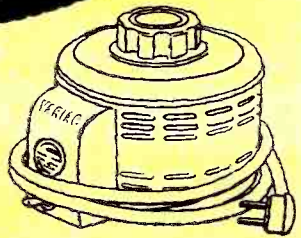
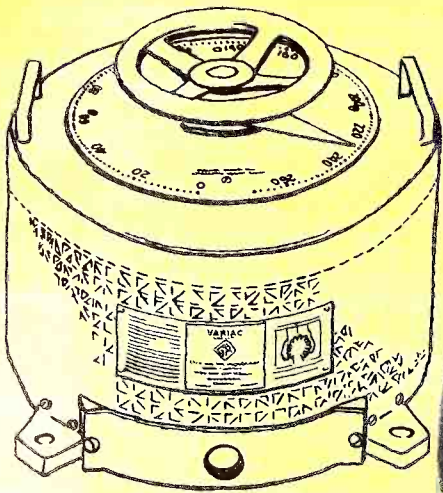
HICKOK has pioneered and perfected the smaller panel size 250° meters with a scale 2 1/2 times as long as the conventional panel instrument. Also available, are hermetically sealed 250° meters as well as the standard molded types in many sizes and ranges.

HICKOK has also introduced the internal pivot design to provide a high standard of accuracy and dependability in an instrument with removeable pivots. Though adding considerable utility, this HICKOK sturdy assembly is even thinner than most external pivot designs. Among special movements developed by HICKOK are: electro-dynamometer, galvanometers, true logarithmic deflections, special curves for special purposes and ruggedized designs for highest shock tests.

Full technical information on the complete line of HICKOK instruments and test equipment is available on request. Kindly list details of your requirements.

THE HICKOK ELECTRICAL INSTRUMENT COMPANY

10527 Dupont Avenue • Cleveland 8, Ohio



for Improved Performance
and Even Longer Life

Variac

with NEW Duratrak Construction

Featuring

Good Regulation — output voltage is substantially independent of load

Very High Efficiency — variable autotransformer rather than resistive control makes for very low losses

Smooth Linear Control — the calibrated dial enables accurate setting to any output voltage within the VARIAC's range

Long Life — the new DURATRAK construction insures a life as long as that of fixed-ratio power transformers operated at rated loads

Unaffected by Surges — VARIACS with DURATRAK will withstand initial surges as high as ten times rated current

Small Size — the VARIAC is smaller than any other control of equal power rating

Rugged Mechanical Design — dependable, long-life construction — no delicate parts — easy conversion from panel to table mounting

Minimum Maintenance — an occasional wiping of the brush track with an alcohol-moistened rag (not supplied) is all that is required — under normal conditions the new DURATRAK will not deteriorate

The VARIAC® is the original continuously adjustable autotransformer first made available by General Radio Company over 20 years ago.

Hundreds of thousands of VARIACS have been sold for industrial and laboratory use throughout the world.

NOW a new, improved, brush-track coating is announced to make the VARIAC even more reliable. The new DURATRAK coating — an alloy of silver applied by a carefully controlled process — eliminates all oxidization problems which may become critical under severe conditions of operation.

The DURATRAK coating limits failure to the same factors which affect standard fixed-ratio transformers... breakdown of insulation due to prolonged overheating, resulting from operation at currents in excess of rated over extended periods.

The new DURATRAK brush track coating is but another step in a continual process of development, designed to make the VARIAC the best voltage control you can obtain.

The VARIAC line is listed on the adjacent page. These autotransformers may be used in many circuits to control any device operating from a-c lines. VARIACS can be used singly or ganged for either higher power or for polyphase connections.

Consisting of Variac UNITS and ASSEMBLIES

All "V" model VARIACS have the new DURATRAK — an improved brush track which sets a new high standard in reliability. VARIACS now have higher ratings per unit volume — will operate at overloads for longer periods — will withstand initial surges ten times their rated current — are practically maintenance free.

INPUT Volts	KVA ^a	OUTPUT		Type No.	Price	Description
		Volts ^b	Amperes Rated ^c Max. ^d			
115	.17	0-115	1.0 1.5	200-B	\$12.50	Uncased, with terminal strip.
		0-135	1.0 1.0			
115	.345	0-115	2.0 3.0	V-2	12.50	Uncased, with terminal strip.
		0-135	2.0 2.0			
115	.86	0-115	5.0 7.5	V-5	18.50	Uncased, with terminal strip.
		0-135	5.0 5.0	V-5M	20.50	With case and terminal strip.
				V-5MT	25.00	With case, terminal box, line cord, plug and switch.
115	1.5	0-115	10.0 13.0	V-10	33.00	Uncased, with terminal strip.
		0-135	10.0 10.0	V-10M	35.50	With case and terminal strip.
				V-10MT	40.00	With case, terminal box, line cord, plug and switch.
115	3.	0-115	20.0 26.0	V-20	49.00	Uncased, with terminal strip.
		0-135	20.0 20.0	V-20M	55.00	With case and terminal box.
115	5.	0-115	40.0 45.0	50-A	140.00	With case and terminal box.
		0-135	40.0 40.0			
115	6.	0-115	40.0 52.0	V-20G2	126.00	2-Gang for Windings in parallel. Requires one 50-P1 Choke (\$12).
		0-135	40.0 40.0			
115	9.	0-115	60.0 78.0	V-20G3	182.00	3-Gang for Windings in parallel. Requires one 50-P1 Choke (\$12) and one 50-P2 Choke (\$12).
		0-135	60.0 60.0			
115	10.	0-115	80.0 90.0	50-AG2	310.00	2-Gang for Windings in parallel. Requires one 50-P1 Choke (\$12).
		0-135	80.0 80.0			
115	15.	0-115	120.0 135.0	50-AG3	460.00	3-Gang for Windings in parallel. Requires one 50-P1 Choke (\$12) and one 50-P2 Choke (\$12).
		0-135	120.0 120.0			
230	.60	0-230	2.0 2.6	V-5H	21.00	Uncased, with terminal strip.
		0-270	2.0 2.0	V-5HM	23.00	With case and terminal strip.
		0-270	1.0 1.0	V-5HMT	27.50	With case, terminal box, line cord, plug and switch.
230	1.2	0-230	4.0 5.2	V-10H	34.00	Uncased, with terminal strip.
		0-270	4.0 4.0	V-10HM	36.50	With case and terminal strip.
		0-270	2.0 2.0	V-10HMT	41.00	With case, terminal box, line cord, plug and switch.
230	1.7	0-230	5.0 7.5	V-5G2	49.00	2-Gang for Windings in series. Cannot be used with grounded load.
		0-270	5.0 5.0			
115		0-270	2.5 2.5			
230	2.4	0-230	8.0 10.4	V-20H	49.00	Uncased, with terminal strip.
		0-270	8.0 8.0	V-20HM	55.00	With case and terminal box.
115		0-270	4.0 4.0			
230	3.	0-230	10.0 13.0	V-10G2	79.00	2-Gang for Windings in series. Cannot be used with grounded load.
		0-270	10.0 10.0			
115		0-270	5.0 5.0			
230	4.8	0-230	16.0 20.8	V-20HG2	126.00	2-Gang for Windings in parallel. Requires one type 50-P1 Choke. (\$12).
		0-270	16.0 16.0			
115		0-270	8.0 8.0			
230	6.	0-230	20.0 26.0	V-20G2	126.00	2-Gang for Windings in series. Cannot be used with grounded load.
		0-270	20.0 20.0			
115		0-270	10.0 10.0			
230	7.	0-230	20.0 31.0	50-B	140.00	With case and terminal box.
		0-270	20.0 20.0			
115		0-230	10.0 10.0			
230	14.	0-230	40.0 62.0	50-BG2	310.00	2-Gang for Windings in parallel. Requires one type 50-P1 Choke (\$12).
		0-270	40.0 40.0			
115		0-230	20.0 20.0			
230	21.	0-230	60.0 93.0	50-BG3	460.00	3-Gang for Windings in parallel. Requires one type 50-P1 Choke (\$12) and one 50-P2 Choke (\$12).
		0-270	60.0 60.0			
115		0-230	30.0 30.0			
460	1.2	0-460	2.0 2.6	V-5HG2	54.00	2-Gang for Windings in series. Cannot be used with grounded load.
		0-540	2.0 2.0			
460	2.4	0-460	4.0 5.2	V-10HG2	81.00	2-Gang for Windings in series. Cannot be used with grounded load.
		0-540	4.0 4.0			
460	4.8	0-460	8.0 10.4	V-20HG2	126.00	2-Gang for Windings in series. Cannot be used with grounded load.
		0-540	8.0 8.0			
460	14.	0-460	20.0 31.0	50-BG2	310.00	2-Gang for Windings in series. Cannot be used with grounded load.
		0-540	20.0 20.0			
115	.86	0-115	5.0 7.5	60-AU	28.00	Uncased, with terminal strip.
		0-135	5.0 7.5	60-AM	30.00	With case and terminal strip.
230 ^e	1.	0-230	2.0 2.6	V-5HG2	54.00	Open Delta Circuit.
		0-270	2.0 2.0			
230	2.	0-230	4.0 5.2	V-10HG2	81.00	Open Delta Circuit.
		0-270	4.0 4.0			
230	3.	0-230	5.0 7.5	V-5G3	68.50	Wye Circuit. Overvoltage connection not recommended.
230	4.	0-230	8.0 10.4	V-20HG2	126.00	Open Delta Circuit.
		0-270	8.0 8.0			
230	5.	0-230	10.0 13.0	V-10G3	113.00	Wye Circuit. Overvoltage connection not recommended.
		0-270	10.0 10.0			
230	10.	0-230	20.0 26.0	V-20G3	182.00	Wye Circuit. Overvoltage connection not recommended.
		0-270	20.0 20.0			
230	12.	0-230	20.0 31.0	50-BG2	310.00	Open Delta Circuit.
		0-270	20.0 20.0			
230	18.	0-230	40.0 45.0	50-AG3	460.00	Wye Circuit.
		0-270	40.0 40.0			
460	2.	0-460	2.0 2.6	V-5HG3	76.00	Wye Circuit. Overvoltage connection not recommended.
		0-540	2.0 2.0			
460	4.	0-460	4.0 5.2	V-10HG3	116.00	Wye Circuit. Overvoltage connection not recommended.
		0-540	4.0 4.0			
460	8.	0-460	8.0 10.4	V-20HG3	182.00	Wye Circuit. Overvoltage connection not recommended.
		0-540	8.0 8.0			
460	25.	0-460	20.0 31.0	50-BG3	460.00	Wye Circuit. Overvoltage connection not recommended.
		0-540	20.0 20.0			

Single Phase
(60~)

Single Phase
(400-2400)
~

Three Phase
(60~)

- (a) KVA as listed = normal input line voltage x maximum output current.
 (b) Maximum output voltage = line input voltage, for "Line Voltage" output connection.
 (c) Rated current (amperes) should not be exceeded for the overvoltage connection. Output KVA for overvoltage connection = output voltage x rated current.
 (d) Maximum current (amperes) can be drawn at maximum voltage for the line-voltage connection only.

(e) On 208-volt circuits, current ratings remain unchanged, but voltage range and KVA ratings are reduced in proportion to voltage. Overvoltage connections may be used, but are not recommended on 230-volt Wye connections.

All 60-cycle VARIACS can be used at rated voltage and current from 50 to 400 cycles and over, except the 200-B when connected for 0-135 volt output

These VARIACS have the new Duratrak construction.

Fill-in Coupon for a Copy
of the NEW Variac Bulletin

GENERAL RADIO Company

75 Massachusetts Avenue, Cambridge 39, Massachusetts
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General Radio Company, 275 Massachusetts Ave.,
Cambridge 39, Mass.

Please send me the new VARIAC bulletin describing
the new VARIACS with Duratrak construction.

Name (572)

Street

City Zone State

OHMITE®

FOR

Dependability

RHEOSTATS

All-ceramic and metal, close control rheostats for unsurpassed dependability and smoothness of operation. Ten stock sizes, 25 to 1,000 watts.

TAP SWITCHES

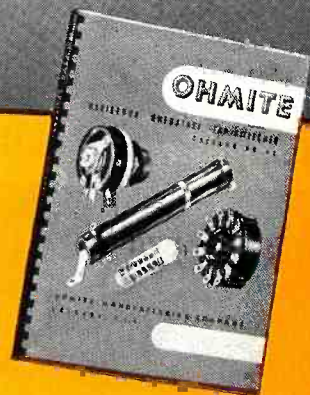
Five compact models, 10 to 100 amperes, AC, up to 12 taps. All-ceramic and metal construction. Silver-to-silver contacts, with self-cleaning rotor.

RESISTORS

A wide range of dependable, fixed, adjustable, tapped, and non-inductive, power wire-wound resistors. Also a wide range of precision resistors.

R. F. CHOKES

Single layer R. F. plate chokes and power line chokes, on steatite or plastic cores. Protected by a special moisture-resistant coating.



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WRITE on company letterhead for Catalog and Engineering Manual No. 40

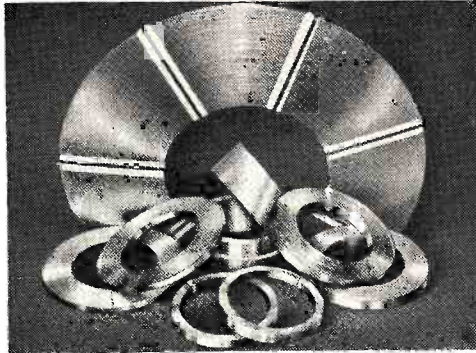
General Plate Products

that solve your Electronic Problems



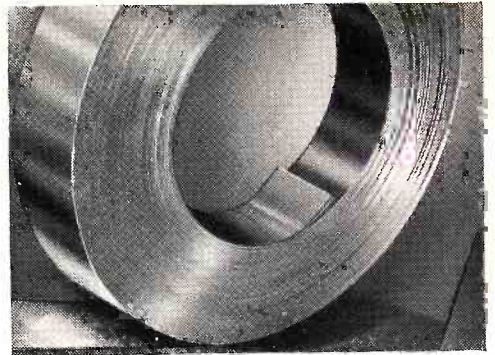
TRUFLEX THERMOSTAT METALS

TRUFLEX thermostat metals are manufactured in a wide variety of types, each with a different reaction to temperature. Uniformity of metal insures accurate and consistent performance. Precision parts fabricated to exact specifications.



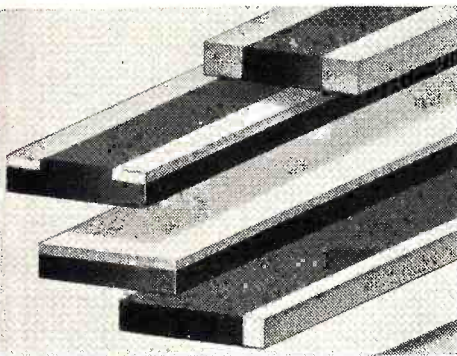
COMPOSITE METALS

Available in practically any combination of precious to precious, precious to base or base to base metals. Combinations for electronics include aluminum-clad iron, nickel-clad iron for anode materials.



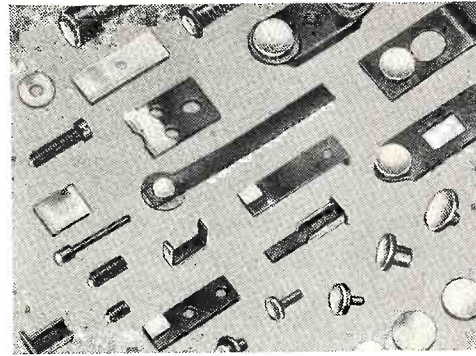
ALCUPLATE

Copper-clad aluminum for component cases or cans, chassis, cooling fins, etc., light weight, excellent conductivity. Copper surface is ideal for soft soldering and electroplating.



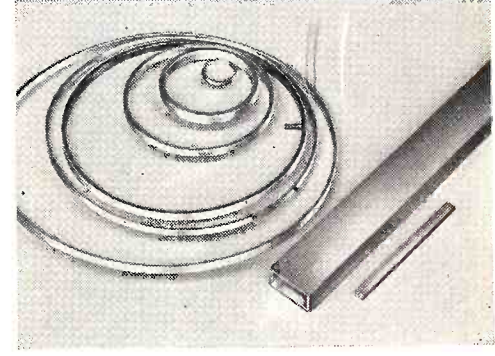
COMPOSITE CONTACT MATERIAL

Precious metals and alloys bonded to base metals available in following types — overlay, single and double edgelay, single and double inlay, Top-Lay, ready for you to fabricate into contacts.



COMPOSITE CONTACTS

General Plate can supply all types of fabricated composite contacts, buttons, rivets, contact assemblies made to customer's specifications. These contacts give electrical conductivity and long life at reduced costs.



WAVE GUIDE and COLLECTOR RINGS

RECTANGULAR WAVE GUIDES. Solid silver, silver lined brass or aluminum. Sizes to government specifications.
COLLECTOR RINGS. Solid silver or precious metal on base metal. All sizes.

GENERAL PLATE PRODUCTS

- **Alfer, Alnifer, Nifer** — Aluminum and Nickel-clad steel for anode plates.
- **Alcuplate®** — Copper-clad aluminum for component cases, chassis, cooling fins, condenser blades, etc.
- **Alsiplate®** — Silver-clad aluminum for lightweight condensers, etc.
- **Composite Contacts and Contact Materials** — Increased strength and longer life at reduced cost.
- **Collector Rings** — Fabricated from solid precious metals or precious-clad base metals. Sizes ranging from fraction of an inch to few feet in diameter.
- **Truflex® Thermostat Metal** — Sheet, strip, formed elements and assemblies produced to specification.
- **Thin Gauge Metals** — Beryllium copper, nickel, pure beryllium, Haynes Stellite alloys, etc.
- **Platinum-Group Metals** — Sheet, wire, tubing, parts of all types. Complete assay and refining facilities for platinum-group metals.
- **Silver and Gold Brazing Alloys** — Available as sheet, wire, powder and fabricated parts.
- **Bondwich** — Solder-clad brazing shim for carbide-tipped tools.
- **Bronco** — Phosphor Bronze-clad copper for high conductive springs.
- **Conflex** — Copper-clad spring steel for electrical and thermal conductive springs at low cost.
- **#720 Manganese Age-Hardening Alloy** — Corrosion resistant spring material for diaphragms, springs, finger stock, etc.
- **Rectangular Wave Guide Tubing** — Wide range of sizes to government specifications.

Write for catalog PR700

General Plate Composite Metals, made by metallurgically bonding one metal to another, are available in sheet, strip, tubing or wire in various widths, thicknesses and diameters.

Silver, gold and platinum-group metals bonded on base metals give solid precious metal performance at a fraction of the cost of solid precious metal. The precious metal provides specific performance requirements such as electrical conductivity and corrosion resistance while the base metal provides workability, strength, and solderability.

Composite base metals provide a new group of engineering metals with properties not available in solid metals. Their use frequently results in lower material costs as compared to solid metals.

In many electronic applications further economy results when General Plate supplies fabricated parts ready for assembly into your product. General Plate makes an infinite variety of fabricated parts, such as electrical contacts, collector rings and TRUFLEX thermostat metal parts to customer's exact specifications.

General Plate Engineers will gladly help you with your problems.

**You can profit by using
General Plate Composite Metals!**

**METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION**

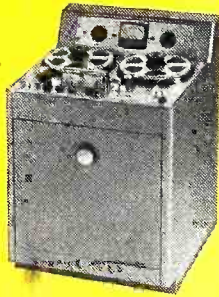
300 FOREST STREET, ATTLEBORO, MASSACHUSETTS

AMPEX

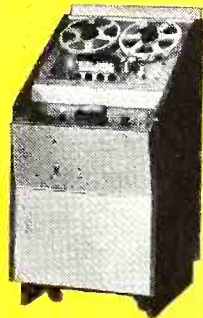
MAGNETIC RECORDERS

the finest tape recorders

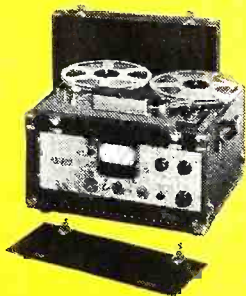
AMPEX AUDIO RECORDERS



Series 300 console



Series 350 table top console on base



Series 400 single case portable



Model 450 console on base

For uses where utmost reliability, "perfect" fidelity and accuracy of timing are of prime importance, Ampex Tape Recorders are universally preferred. America's four major broadcasting networks, the country's leading phonograph record manufacturers and various important musical organizations are among those whose usage has established Ampex as the world's standard of excellence in sound recording.

SERIES 300

These, the finest of the Ampex line, are the machines used where speaking or musical performances justify the best recordings it is possible to make. Because of their supreme reliability, the 300 Series machines are used by major radio networks to originate, delay and rebroadcast important radio shows. Record manufacturers use the Series 300 for master recordings because of their high signal-to-noise ratio and low flutter and wow.

SERIES 350

Newest of Ampex's general purpose audio recorders, the 350 has a 30° slant on the top-plate. This puts reels, editing knobs and all controls within easier reach of the operator. Tape editing is faster and less tedious. A three motor tape transport (also used on the higher priced Model 300) provides excellent tape control and utmost reliability of operation. The Series 350 is unusually accessible for servicing.

SERIES 400

The Series 400 was the first tape recorder to bring the Ampex standard of performance within reach of smaller radio stations, schools, conservatories, high fidelity enthusiasts and semi-professional users. The 400 Series portables are the lightest of the Ampex models and consequently the best suited for professional quality recordings on location.

MODEL 450

For background music, automatic broadcasting and TV test patterns, the Model 450 Continuous Tape Reproducer provides up to 8 hours of continuous unrepeated program. The Model 450 uses 14-inch NARTB reels with double track pre-recorded tapes. Starting, stopping, reversing and program repeating are controlled automatically with no attention from a standby operator.

TAPE DUPLICATOR

Designed to make duplicate tapes at minimum labor cost, the Ampex Tape Duplicator makes from 1 to 10* duplicates simultaneously and employs a time-saving speedup. Double track tapes are made in one pass. Fidelity is high (see specifications). Duplicates of any standard tape speed can be made from masters of any standard speed.

*User has the option of buying from 1 to 10 slaves to operate from one master unit.

*SPECIFICATIONS

	Series 300	Series 350	Series 400	Model 450	Tape Duplicator
Frequency response (Tape speeds shown are not all available in all models)	15 in/sec. — 30 to 15,000 cps. within ± 2 db 7½ in/sec. — 40 to 15,000 cps. within ± 4 db 40 to 10,000 cps. within ± 2 db 3¾ in/sec. — 50 to 7,500 cps. within ± 4 db				
Signal-to-noise ratio (by NARTB Standards)	Over 60 db	Over 55 db	Over 55 db	Over 50 db	Over 45 db
Flutter and wow	Well under 0.1% rms. at 15 in/sec.	Well under 0.2% rms. at 15 in/sec.	Well under 0.2% rms. at 15 in/sec.	Well under 0.4% rms. at 3¾ in/sec.	Ampex Data Bull. 3-3-1
Available mounting	Console, rack and portable				Unmounted

*Full specifications are given in bulletins on each individual series or model.

Write for further information to Dept. W-1274

AMPEX ELECTRIC CORPORATION
934 Charter Street, Redwood City, California

- Audio Distributors in principal cities
- Canadian Distribution — Canadian General Electric Company

for every field of use

AMPEX DATA RECORDERS

Ampex magnetic tape machines retain test data in "live" electrical form. Hence a playback of the data is like a rerun of the original test. The tremendous "memory capacity" of magnetic tape retains more complete and detailed information than any other data recording method. The data can be scanned, speeded up, slowed down, automatically reduced or converted to any other electrical, visual or physical form. To cover the widest range of data situations, Ampex data recorders are offered with various frequency ranges, numbers of tracks and modes of recording.

F-M CARRIER TYPE RECORDER — MODEL 306

Explosions, shock waves, geophysical data and other highly transient phenomena can be recorded on the Model 306 with excellent "instantaneous" accuracy. Because the machine uses an fm carrier to modulate the signal, the accuracy of the recording is unaffected by minor tape imperfections.

Also, the Model 306 is able to record the vast majority of all mechanical occurrence, since it covers the extremely useful frequency range from 5000 cycles/sec. down to zero (D.C.).

OPTIONS: One to 14 tracks
Rack, console or combination mounting
Record and playback, record only or playback only

WIDE RANGE DIRECT RECORDER — MODEL 307

With a frequency response from 100 to 100,000 cycles per second, the Model 307 is particularly suited to steady state data occurring over a wide range of frequencies. The 307 has had extensive application in fm-fm telemetering, sharing this field with the Model 500 described below.

OPTIONS: Same as Model 306

PULSE WIDTH RECORDER — MODEL 303

This model can record any type of phenomena that lends itself to pulse width coding. Pulses can range from 60 to 1000 microseconds and will be accurate in duration to closer than 2 microseconds. Since each track on the machine may record commutated data consisting of many channels, it is possible to record hundreds of parallel data channels on one tape on a Model 303 machine.

OPTIONS: Same as Model 306

COMBINATION RECORDERS — MODELS 309, 311, etc.

Special Ampex Data Recorders can incorporate combinations of the heads and electronic circuitry of the 303, 306 and 307. Thus the parallel tracks on the same combination recorder might have the widely differing characteristics of each of those models. For example, on its parallel channels such a recorder might have an overall frequency response of 0 to 100,000 cycles/sec.

OPTIONS: Same as Model 306 (but 2 or more tracks)

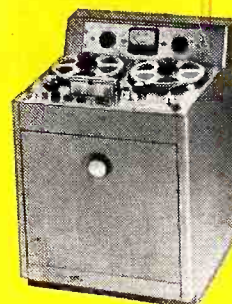
"LOW FLUTTER" WIDE RANGE RECORDER — MODEL 500

The Model 500 is a four-track, two-speed magnetic tape recorder designed to achieve extreme stability of tape motion while recording information in the frequency range between 100 and 100,000 cycles. Thus it is able to record fm-fm telemetering data without introducing any objectionable data error from small variations in tape speed. It has the lowest known flutter and wow characteristics of any tape recorder—less than 0.1% peak-to-peak by RDB standards.

Console mounting only
Four tracks only



Series 300 data recorder in rack mounting.



Series 300 data recorder in console mounting. Rack mounting of portions of the electronic components may be necessary on multi-track console mounted recorders.



Ampex Model 500 Recorder

AMPEX ELECTRIC CORPORATION
934 Charter St., Redwood City, California

BRANCH OFFICES:
New York, Chicago, Atlanta, San Francisco
and College Park, Maryland (Washington,
D. C., area)

DISTRIBUTORS:
Radio Shack, Boston; Bing Crosby Enterprises,
Los Angeles; Southwestern Engineering & Equipment,
Dallas and Houston; Canadian General Electric Company in
Canada.

AMPEX
MAGNETIC RECORDERS

For specifications and other information, write Dept. W-1274



Type ML-6 **Range**
 1.0 mc - 75.0 mc. supplied per mil Type CR-18, CR-19, CR-23, CR-27, CR-28, CR-32, CR-33, CR-35, CR-36, CR-48 when specified. Hermetically sealed metal holder with glass and metal base. Height of can is $\frac{3}{4}$ -inch. Pins are .050" diameter, spaced .486".

Type ML-14 **Range**
 3.0 - 50.0 mc. Identical in performance to Type ML-6 except height of metal can is $\frac{1}{2}$ -inch.

Type ML-6A
 Identical to Type ML-6 except provided with .093" diameter pins.

Type ML-6W **Range**
 3.0 - 15.0 mc. This unit is same as Type ML-6 except wire leads are provided, eliminating need for crystal socket.

CRITICAL QUALITY CONTROL

Pays Off in Performance of

 *Midland*

CRYSTALS

The quality of Midland Crystals — which is another way of saying the completely dependable job they will do for you — is assured by exacting tests and controls through every step of processing. The finest precision equipment and most advanced techniques known to the industry are used by Midland from selection of raw quartz to final sealing of the crystal.

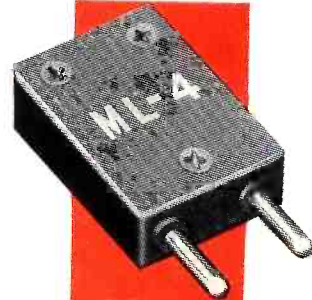
That's a big reason why Midland has climbed to its present position as the world's largest producer of quartz crystals for use in 2-way communications and other electronic devices.

Midland's engineering staff is ready to help in any project involving the use of crystals.

*Whatever your Crystal need, conventional or specialized
 When it has to be exactly right, contact*

 *Midland*

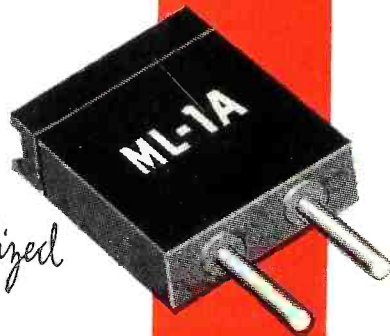
MANUFACTURING CO., INC.
 3155 Fiberglas Road Kansas City, Kansas



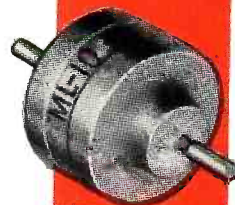
Type ML-4 **Range**
 1.0 - 10.0 mc. Supplied per mil Type CR-5, CR-6, CR-8, CR-10 when specified. Holder is phenolic, gasket sealed. Holder size is $1\frac{1}{8} \times \frac{13}{16} \times \frac{7}{16}$ with .093" diameter pins $\frac{1}{2}$ " long spaced .486".



Type ML-13
 Units of this type are currently undergoing tests on experimental basis. The unit is hermetically sealed. Pin dimensions are the same as our Type ML-6. Height of can is $\frac{1}{2}$ -inch.

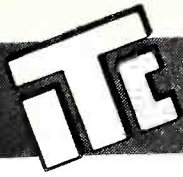


Type ML-1A **Range**
 2.0 - 15.0 mc. Supplied per mil Type CR-1A when specified. Holder is phenolic, gasket sealed. Holder size is $1\frac{1}{4} \times 1\frac{1}{8} \times \frac{27}{64}$ with .125" diameter pins $\frac{5}{8}$ " long, spaced at .500".



Type ML-10 **Range**
 15.0 - 50.0 mc. Supplied per mil Type CR-24 when specified. Over-all length is 1.055". Pin contacts, .062" diameter.

WORLD'S LARGEST PRODUCER OF QUARTZ CRYSTALS



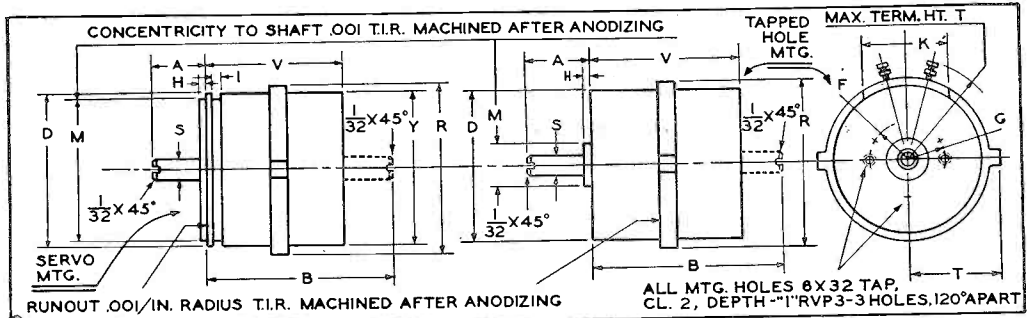
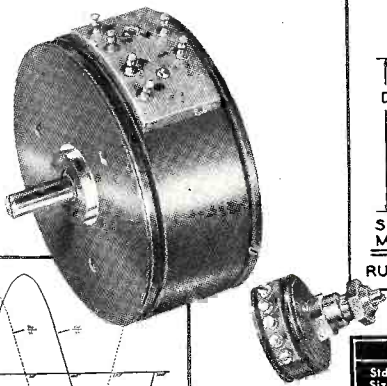
PRECISION POTENTIOMETERS

Technology Instrument Corporation potentiometers are designed for application in computing devices, instrumentation, electronic control and servo mechanisms — wherever extreme electrical and mechanical precision is an essential requirement.

As a result of years of custom manufacturing a complete line of standard sizes is available ranging from 7 inches in diameter to the sub-miniature 7/8" in diameter,

providing optimum accuracy in minimum size.

Custom design both mechanical and electrical is a featured TIC service. Precision non-linear pots may be designed to meet customer's requirements from either empirical data or implicit functions. Taps and special winding angles anywhere up to 360° continuous winding can be incorporated into both linear and non-linear precision potentiometers.



Std. Size	Mounting	DIMENSIONS														
		D ±.005	F ±.005 Radius	G ±.005 Radius	H ±.005	I ±.000 -0.015	M ±.0000 -0.0035	R ±.010 Max.	K Max.	S ±.0000 -0.0005	T Max. Radius	Y Nom.	V1 Max.	V2 Max.	A ±1.34	B ±.010
RV7/8	Servo	.875			.025	.062	.7500	1 3/32	1/2	.1250	5/8	7/8	25/32	1 9/32	1"	As spec.
RV1	"	1.062			.062	.062	.968	1 1/4	3/4	.1250	23/32	1 1/16	5/8	1 3/16	"	As spec.
RV1 1/8	"	1.656			.062	.078	1.4680	1 29/32	1 3/8	.2500	1 3/8	1 5/8	1 1/16	1 29/32	"	As spec.
RV2	"	2.000			.062	.078	1.750	2 1/4	1 3/4	.2500	1 3/8	2	1 5/16	2 5/16	"	As spec.
RVP3	"	3.000			.062	.125	2.500	3 1/4	2	.2500	1 7/8	3	1 1/4	2 7/32	"	As spec.
RV1 1/8	Tapped Hole	1.656	.437		.093	3/16	.5000	1 29/32	1 3/8	.2500	1 7/32		7/8	1 23/32	"	As spec.
RV2	"	2.000	.437		.093	3/16	.5000	2 1/4	1 1/2	.2500	1 3/8		1 1/32	2	"	As spec.
RVP3	"	3.000	.875		.105	3/16	.7500	3 1/4	2	.2500	1 7/8		1 9/32	2 1/2	"	As spec.

The type RVP3-S59 Sine-Cosine potentiometer, one of the many types standard with the Technology Instrument Corporation, performs two operations in a single potentiometer assembly . . . two wipers spaced 90 degrees apart yield both sine and cosine outputs.

1. Total resistance: 20,000 ohms plus or minus 5 per cent between terminals 1 and 3.
2. Accuracy: Plus or minus .5 per cent of the peak to peak amplitude.
3. Maximum voltage: Conservatively rated as 80 volts between terminal 1 and 3.
4. Life: Guaranteed for at least 500,000 complete cycles in either direction at 30 rpm.
5. Potentiometer base: 3" diameter, precision machined aluminum.
6. Resistance Element: Karma wire with temperature coefficient of .00002 parts per degree centigrade.

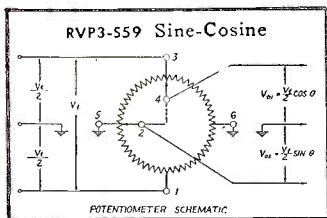
Type RVT TRANSLATORY POTENTIOMETER

Specifications:

Resistance Range—100 to 100,000Ω for 2 1/2 to 6" strokes.
Resistance Tolerance—±5% (Standard).
Independent Linearity—±1% of Total Resistance (Std.).
Silver Overtravel—5/32 inches at either end.
Power Dissipation—Approx. one watt/inch of stroke length.
Ambient Temperature Range—55° to +80°C.
Temperature Coefficient—.00002 part per degree C.
Life—100,000 complete cycles at 30 strokes/min. or less.
Stroke Lengths—1/2 to 15 inches.



TRANSLATORY POTENTIOMETER provides output proportional to a linear displacement rather than a rotary motion of a shaft.



TIC Pongometer (precision potentiometer noise tester) illustrated with TIC instruments. See page 447.

TECHNOLOGY INSTRUMENT CORP. PRECISION POTENTIOMETER CHARACTERISTICS												
Style	Nominal resistance range	Resistance Tolerance		Independent Linearity		Power Rating	Electric rotation angle		Electrical Rotation Angle Tolerance		TORQUE AT 25° C. sleeve bearing	
		Std.	Best	Std.	Best		Std.	Max.†	Std.	Best	Std.	Min.
RVP3	300-200,000Ω	±5%	±0.5%	±0.2%	above 5KΩ ±0.1%	6 Watts @ 25°C	320°	358°	±3°	±0.5°	1 oz. in.	.5 oz. in.
RV2	100-150,000Ω	±5%	±0.5%	±.35%	above 5KΩ ±.15%	4 Watts @ 25°C	320°	358°	±3°	±0.5°	1 oz. in.	.5 oz. in.
RV1 1/8	200-150,000Ω	±5%	±0.5%	±0.5%	above 10KΩ ±.20%	3 watts @ 25°C	320°	357°	±3°	±1°	1 oz. in.	.5 oz. in.
RV1	200-100,000Ω	±5%	±1%	±1%	above 5KΩ ±0.4%	2 Watts @ 25°C	320°	355°	±5°	±2°	1 oz. in.	.3 oz. in.
RV7/8	200-40,000 Ω	±5%	±1%	±5%	above 2KΩ ±0.5%	2 Watts @ 25°C	320°	350°	Nom.	±3°	1 oz. in.	.3 oz. in.
RV3-8*	200-200,000Ω	±5%	±1%	±1%	above 5KΩ ±.25%	8 Watts @ 25°C	315°	358°	±3°	±1°	6 oz. in.	3 oz. in.
RV3-12*	200-500,000Ω	±5%	±1%	±1%	above 5KΩ ±.25%	12 Watts @ 25°C	315°	358°	±3°	±1°	6 oz. in.	3 oz. in.

*special bakelite Model
†Non-Shorting. Units may also be provided with continuous winding; i.e., 360° electrical rotation.
Dielectric strength 5 sec. — Types RVP3, RV2, RV1 1/8, RV1, RV7/8 = 1000 V D.C.; Types RV3-8, RV3-12 = 2000 V D.C.

Technical Catalog — yours for the asking. Contains detailed information on all TIC Instruments, Potentiometers and other equipment. Get your copy without obligation — write today.

TECHNOLOGY INSTRUMENT CORP.

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Over 2 years of laboratory development and testing were required to achieve a sealed resistor design up to Mepco's standard of quality. No sacrifice of our standard time-proven features have been made in order to perfect this sealed resistor.

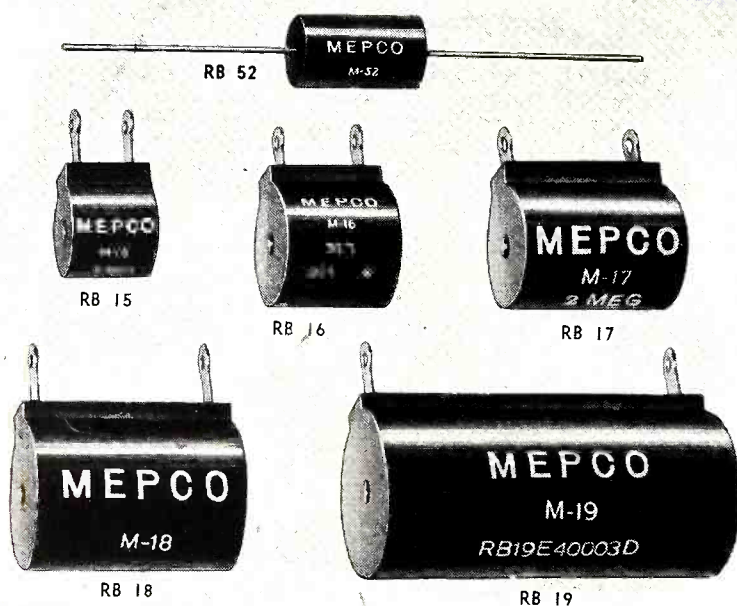
Completely hermetically sealed, these resistors provide perfect protection against immersion and high humidity.

All requirements of MIL-R-93A and JAN-R-93 are exceeded.

The operating temperature is -65°C to $+125^{\circ}\text{C}$. Temperature coefficients of $\pm .003\%/^{\circ}\text{C}$ to $\pm .017\%/^{\circ}\text{C}$ depending upon your requirements. (Refer to MIL-R-93A).

Other sizes available on special order.

MIL-R-93A NEW SEALED TYPES



WIRE TERMINAL TYPES

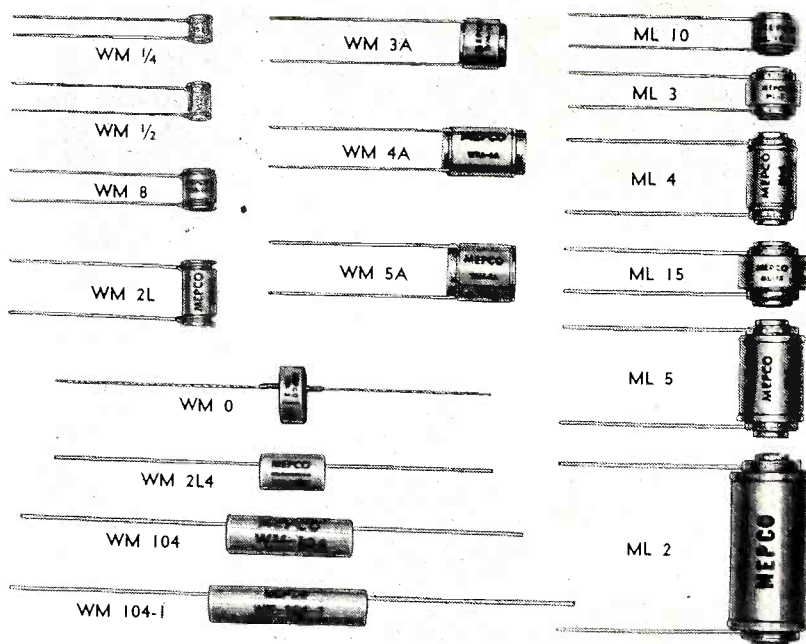
Designed for direct connection into circuit without use of additional leads.

These resistors are of the same basic construction and materials as standard JAN and MIL types therefore providing equal dependability and long life.

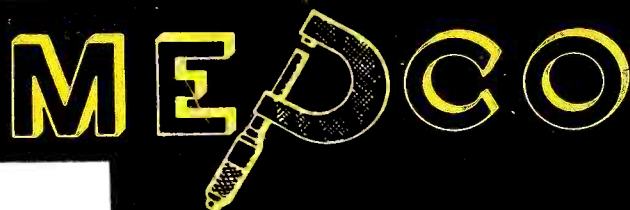
Low Temperature Coefficient alloys provide $\pm .003\%/^{\circ}\text{C}$ from -65°C to $+125^{\circ}\text{C}$ unless otherwise specified by your requirements.

Resistance tolerances range from $\pm 1\%$ down to $\pm .02\%$. Sets of matched resistors can be supplied $\pm .005\%$ or lower.

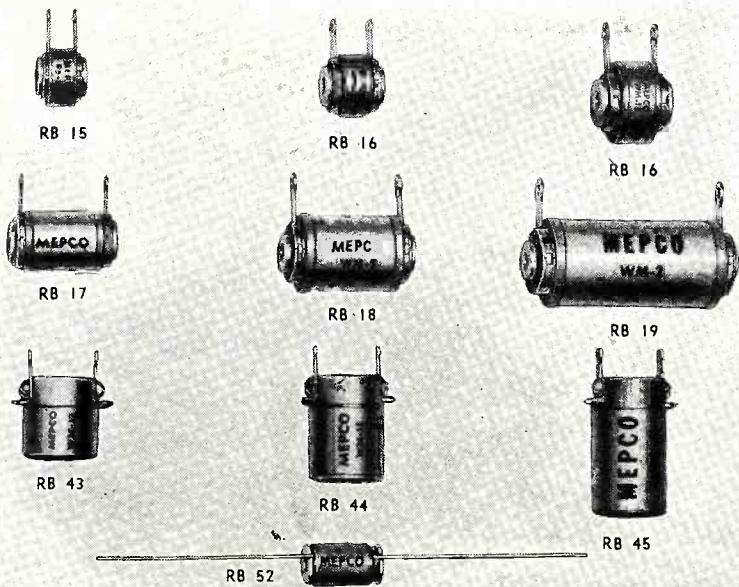
Special types not shown can be manufactured to your exact specifications.



RESISTORS



MIL-R-93A JAN-R-93 STANDARD TYPES



Our standard time proven JAN, MIL and Commercial lug terminal resistor.

Manufactured and 100% tested in accordance with the applicable specifications, these resistors are used by every major electronic equipment manufacturer in the country.

Reversed and balanced PI-windings for low inductance, with use of only the finest resistance alloys.

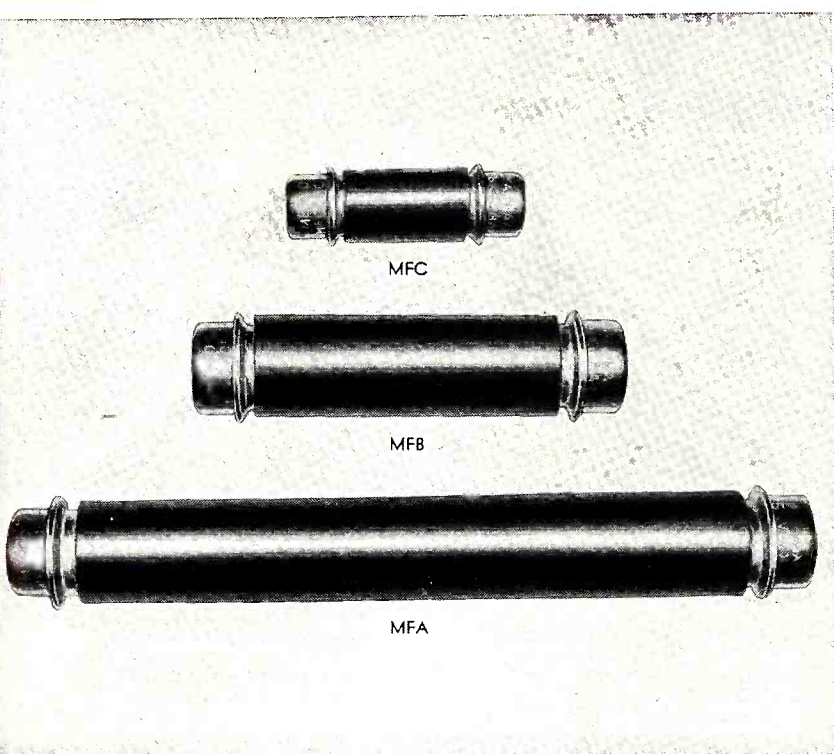
Impregnated with approval fungus, moisture and salt waterproofing compounds.

JAN approved non-hygroscopic steatite bobbin, specially treated prior to winding in order to provide additional protection for fine enameled wire.

Protective fungi resistant acetate label.

Rigid hot solder coated brass terminals for easier soldering.

JAN-R-29 METER MULTIPLIERS



Surpass all requirements of JAN-R-29

HERMETICALLY SEALED:

Insures dependable operation under most severe moisture conditions.

STEATITE PROTECTIVE CASING:

Glazed surface prevents high voltage leakage.

WINDINGS:

"Certified" low temperature coefficient resistance alloys properly "aged" to provide long term stability.

REPLACEABLE INTERNAL SECTIONS:

Eliminate complete loss of unit if damaged.

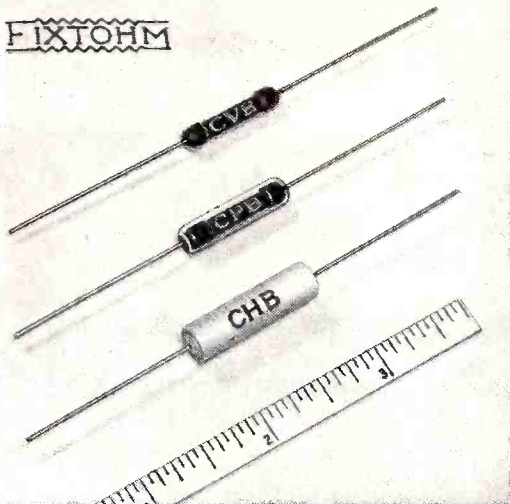
FERRULE TERMINALS:

Heavy nickel plated brass. Corrosive resistant. Fit standard fuse clips.

MORRISTOWN, NEW JERSEY

RESISTORS

FIXTOHM



FIXED, ACCURATE
NON-WIREWOUND

DEPOSITED CARBON RESISTORS
Western Electric Co. Licensee

Three finishes to meet varied
applications and requirements

Three power ratings —
1/2, 1 & 2 watts

All have crystalline carbon film
deposited on ceramic core

USE "FIXTOHM" BECAUSE . . .

ACCURACY: $\pm 1.0\%$ standard

STABILITY: $\pm 0.3\%$ average resistance change

H.F. CHARACTERISTICS ARE EXCELLENT

SMALL SIZE * * * LOW COST

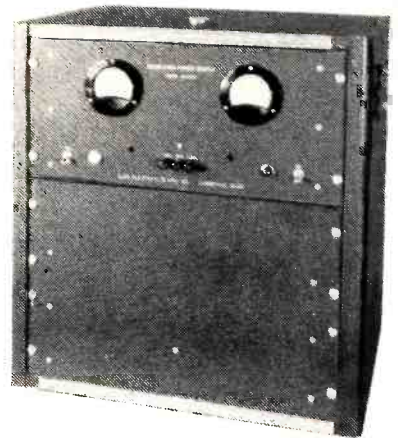
TEMPERATURE COEFFICIENT: low, negative

WRITE FOR TECHNICAL DATA AND PRICES

CAMPBELL INDUSTRIES, INC.
ST. ELMO STATION CHATTANOOGA 9, TENN.

REGULATED POWER SUPPLY

MODEL PR-1000



SPECIFICATIONS

- ★ REGULATED OUTPUTS:
+300 VDC $\pm 10\%$ adj. Maximum current one amp. continuous.
+150 VDC $\pm 10\%$ adj. Maximum current 150 milliamperes.
- ★ HEATER: 6.3 Volt @ 6.3 Amp.
- ★ REGULATION: Better than .03 of one percent
- ★ RIPPLE: Less than 3 millivolts.
- ★ IMPEDANCE: Less than 1/2 ohm.
- ★ FUSED: Input and output.
B+ delayed for protection.
- ★ Moderately priced.
- ★ Short delivery dates.

ALCO

ELECTRONICS MFG. CO.

102 Marston St. Lawrence Mass

New 800-2600 mcs FREQUENCY METERS

Lightweight — Portable Units

SPECIFICATIONS

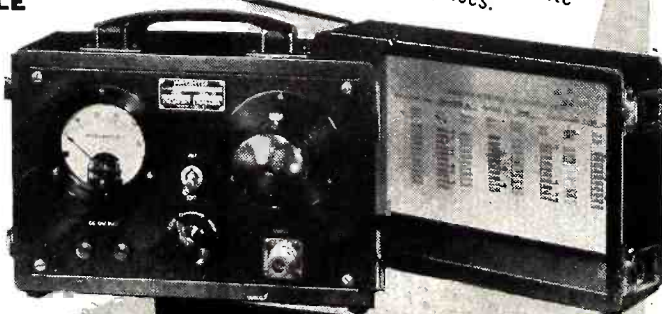
1. **ACCURACY**
Better than .05% from 20°F to 120°F
2. **SENSITIVITY**
Usable indication with 1 milliwatt input
Adjustable for higher levels
3. **INDICATOR**
50 Microammeter
4. **INPUT**
50 Ohm Type N Connector
5. **EXTERNAL DC OUTPUT**
Pin Jacks
6. **EXCURSION OF MICROMETER**
One-half inch
7. **MICROMETER SCALE**
at 1000 Mc —
1 Division equals 290 KC
at 1400 Mc —
1 Division equals 350 KC
at 2000 Mc —
1 Division equals 450 KC
at 2600 Mc —
1 Division equals 555 KC
8. **EXTERNAL SIZE**
6 1/2 x 9 3/4 x 7"
9. **WEIGHT**
Four pounds

... For Field and
Laboratory Use!

Models

FS-C-171-A 800-1200 MCS.
FS-C-172-A 1200-1600 MCS.
FS-C-173-A 1600-2250 MCS.
FS-C-174-A 1700-2600 MCS.

Units consist of cavity body, microm-
eter control, crystal, suitable con-
nectors and calibration chart. Write
for specifications and prices.



frequency standards

P. O. Box 504,
Asbury Park, New Jersey

(Cavity units are also avail-
able for custom housing)

THEY* . . .

have learned to rely
on the ELECTRONICS
BUYERS' GUIDE for
essential product in-
formation. They natur-
ally go to the "Guide"
first, when they de-
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neers, designers, spe-
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agents, maintenance
and production
personnel.

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ABC

ABP

Why

are more and more industries

specifying Adlake Mercury Relays

for Timing and Control functions?

Because . . . →

Every
Adlake Relay
gives you
these PLUS
Features:

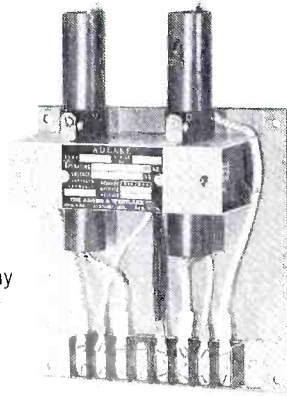
- HERMETICALLY SEALED—dust, dirt, moisture, oxidation and temperature changes can't interfere with operation.
- SILENT AND CHATTERLESS
- REQUIRES NO MAINTENANCE
- ABSOLUTELY SAFE
- MERCURY-TO-MERCURY CONTACT—prevents burning, pitting and sticking.

*...and every Adlake Relay is
tested...and guaranteed...
to meet specifications!*

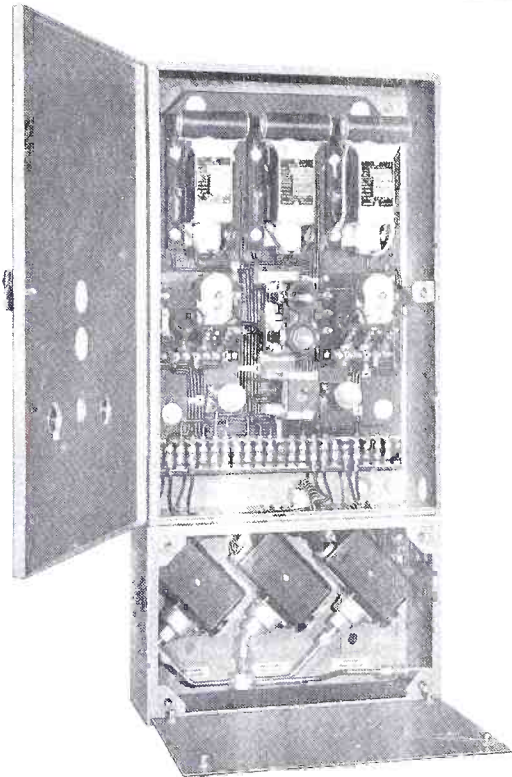
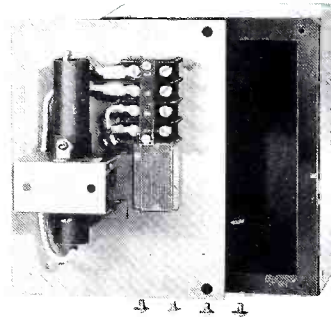
For complete details of the broad ADLAKE Relay line, send for your copy of the new ADLAKE Relay Catalog. Address: The Adams & Westlake Company, 1953 N. Michigan, Elkhart, Indiana. In Canada, write Powerlite Devices Limited, of Toronto.

ADLAKE *Custom-Built* ASSEMBLIES

Power Relay Assembly



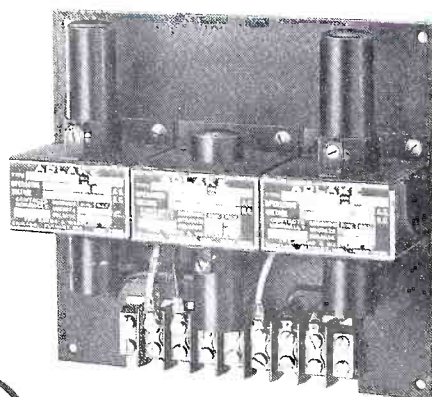
Lighting Control



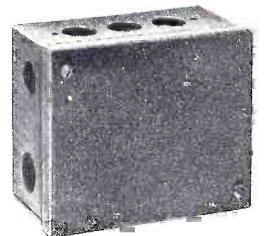
Complete Control Units

The Adams & Westlake Company's Engineering Department is completely equipped to serve your special needs. ADLAKE service includes developing and building complete control systems, custom-built terminal boxes, junction boxes, and similar special assemblies.

Whatever your particular relay problem may be, please feel free to present it to us



Delayed Action Control



Special Waterproof Junction Box



THE Adams & Westlake COMPANY

Established 1857 • ELKHART, INDIANA • New York • Chicago

Manufacturers of ADLAKE Hermetically Sealed Mercury Relays

Baer

FABRICATED PARTS SHEETS • RODS • TUBES

VULCANIZED FIBRE THERMOSETTING PLASTICS

phenolic, melamine and silicone resins in paper, cotton fabric, glass cloth and Nylon base materials

CRAFTSMANSHIP...

Workmen of exceptional aptitude in the special characteristics of vulcanized fibre and thermosetting plastic (phenolics, melamines and silicones) have been trained through the years by BAER specialists in fabrication of such materials. Finest craftsmanship and economy can be depended upon.

MANUFACTURING...

20,000 sq. ft. of manufacturing and storage area plus complete standard and special equipment for most efficient production of large or small orders, assure perfection of product and prompt deliveries. BAER standards are well known.

ENGINEERING...

If you have a problem relating to the use of vulcanized fibre or thermosetting plastics, BAER engineers are always available for consultation. BAER experience and manufacturing techniques are especially valuable in the solution of problems in creating odd shapes with special physical characteristics.



All materials are made in strict accordance with NEMA and/or government standards.



- BEVELING
- DRILLING
- HOT STAMPING
- LAPPING
- LUGGING
- MARKING
- MILLING
- PUNCHING
- ROUTING
- SAWING
- SHAVING
- SHEARING
- SILK SCREENING
- SLITTING
- STAMPING
- THREADING
- TURNING

- ANTENNA
- INSULATORS
- ARC SHIELDS
- BUSHINGS • DISCS
- FUSE BLOCKS
- GASKETS
- GROMMETS
- INSULATORS
- NUTS • PANELS
- RATCHETS • SPACERS
- SPACER BLOCKS
- SWITCH BARS
- SWITCH HANDLES
- TAGS • TUBES
- TERMINAL BLOCKS
- TERMINAL BOARDS
- TRANSFORMER
- WEDGES
- WASHERS

... COLORS

Standard colors of vulcanized fibre are GRAY, RED and BLACK. Fish paper (electrical insulation) is SLATE GRAY.

Thermosetting plastics are available in BLACK or NATURAL, depending upon the base material.

... STOCKS

Sheets, rods and tubes in fibre and plastics are available from BAER stocks. Almost anything you want—when you want it, can be provided by BAER. Send drawings, blue prints or rough sketches for our prompt estimate.

SPECIALTIES AND SHAPES TO CUSTOMER SPECIFICATIONS

PHONE WAVERLY 6-2250-1-2

N. S. BAER COMPANY
HILLSIDE, NEW JERSEY



MAIN OFFICE AND PLANT • 7 MONTGOMERY STREET

Look To *Polarad* For...

MICROWAVE EQUIPMENT

Features:

- Frequency Range 10 mc-21,000 mc — 4 tuning heads
- Single dial tuning to 1% accuracy
- Spectrum Display variable from 250 kc-25 mc
- Frequency Marker for measuring frequency differences of 0-25 mc
- Supplied with 1-12 kmc broad band attenuators
- Automatic voltage selector for each tuning head

Uses:

- Examine pulse spectrum of magnetrons and klystrons
- Measure noise and interference spectrum
- Broad band receiver from 10 mc to 21,000 mc
- Observe and measure harmonic frequencies of transmitter
- Measure signals separated by small frequency differences
- Measure bandwidth of microwave cavities
- Calibration microwave oscillators and preselectors

Features:

- Single dial tuning to 1% accuracy
- Tracked reflector-no wavemeter or klystron modes to set
- Contained 0-120 db attenuator to ± 1 db absolute
- Internal Modulation-pulse-F.M. external pulse input

Uses:

- Test Sensitivity and frequency of radar systems
- External Sync output allows use as X-Band Test Set
- Testing of microwave components, waveguides, etc.

Features:

- Single dial tuning to 1% accuracy — direct reading dial
- High power output
- Provisions for external modulation
- Large frequency coverage

Uses:

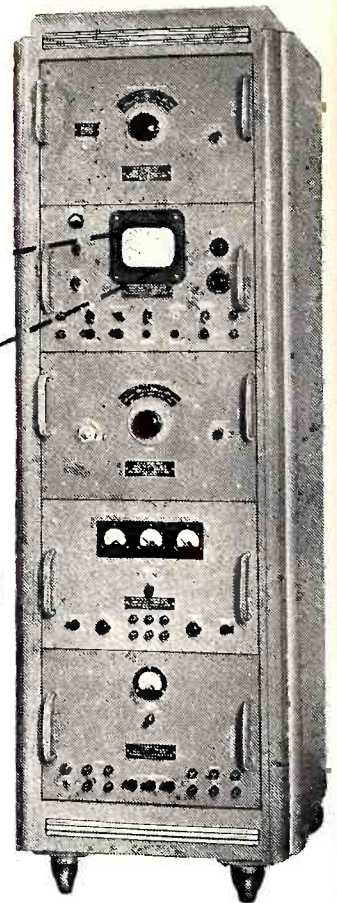
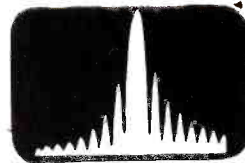
- Source of High Microwave Power over wide frequency ranges
- Testing microwave components, waveguides, VSWR etc.
- Antenna measurements

Features and Uses:

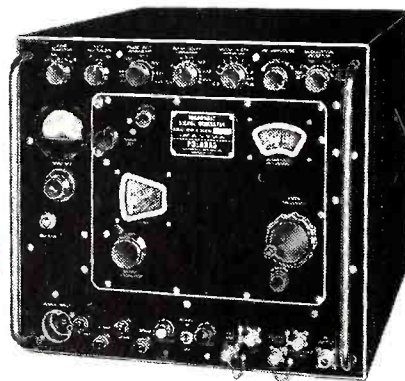
- Well regulated supplies for use with Polarad's Series of Microwave Signal Sources
- Used for powering Raytheon's wide band Klystron tubes

Features and Uses:

- Frequency response flat from 10 cps to 20 mc
- Amplifier Gain 320 (50 db)
- Phase linear with frequency over entire frequency range
- Contained high impedance attenuator 0-50 db and external probe
- Wide band amplification problems



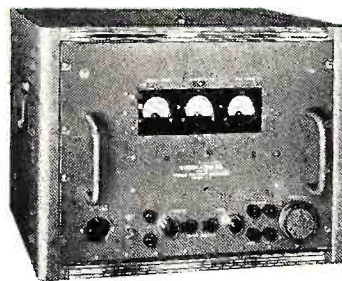
SPECTRUM ANALYZER
Model LSA
10 mc—21,000 mc



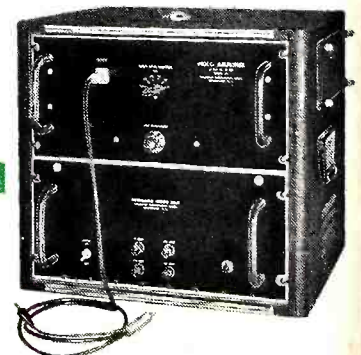
MICROWAVE SIGNAL GENERATOR
Model MSG-4
7,000 mc—10,750 mc



MICROWAVE SIGNAL SOURCES
Model:
SSR 650 mc — 1300 mc
SSL 1000 mc — 2300 mc
SSS 2000 mc — 4600 mc
SSM 4300 mc — 8300 mc
SSX 7900 mc — 10750 mc



KLYSTRON POWER SUPPLY
Model KX



WIDE BAND VIDEO AMPLIFIER
Model VT 10 cps to 20 mc



POLARAD ELECTRONICS CORP., 10

We Manufacture a Comp

Export Dept. 13 E. 40th

Sales Representatives: Albuquerque • Boston • Bridgman • Chicago • Cleveland

Look To Polarad For . . .

TELEVISION EQUIPMENT

Monoscope Signal Source and Synchronizing Generator are used for the generation of composite Video Signals (test pattern) for testing of Video Systems.

Features:

PT-101

Standard RTMA signals for driving camera

Built in 3" oscilloscope for monitoring output signals and for general maintenance

Simple adjustment controls for all output pulses on front panel

PT-102

Standard RTMA composite Video Signals—3 outputs 2 volts across 75 ohms.

Overall resolution 500 lines

Linear high definition test pattern for laboratory and industrial use

Self contained regulated and high voltage supply

Features:

Special Sync separator for TV signals
5" cathode ray tube

Signal calibration accuracy 2%

Large horizontal expansion amplification—24 tube diameters

Frequency response 4 mc \pm 3 db, 60 cps sq. wave less than 2% tilt

Portable instrument that may be rack mounted

Uses:

General purpose oscilloscope, especially designed for Video Wave form analysis

Features:

Monochrome and/or color signals per FCC and NTSC standards

Resolution, 450 lines or better

12" Kinescope

Portable instrument that may be rack mounted

Horizontal and vertical linearity excellent

Uses:

High Fidelity Picture Monitor—Studio or Laboratory

Use with storage and traveling wave tubes

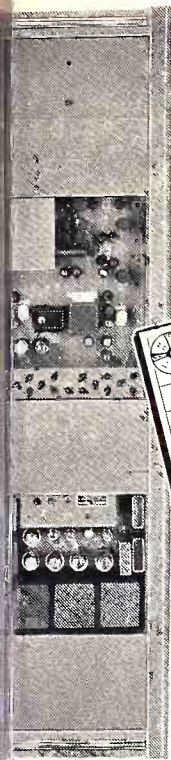
Model:	Output voltage	Output current
PT-110	400-450 V.	250-300 Ma
PT-111	250-300 V.	100-400 Ma
PT-111D	250-300 V.	100-400 Ma
PT-112	250-300 V.	150-800 Ma

Features:

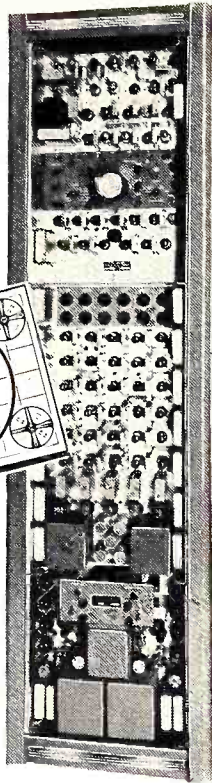
Electronically regulated power supplies
Ripple less than 30 mv. peak to peak

Rack mounting—dishpan construction—
all parts readily accessible

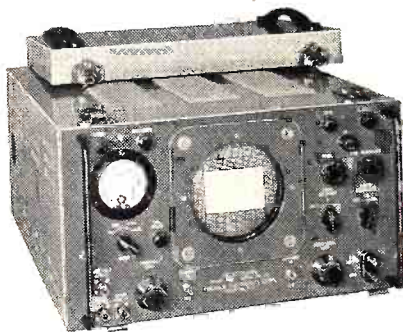
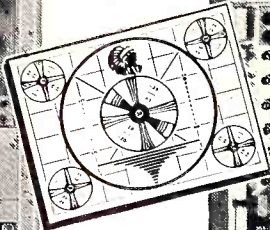
Centering current for T.V. application



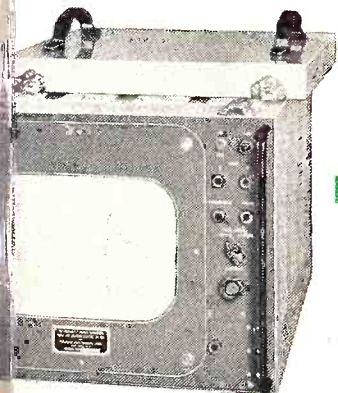
MONOSCOPE SIGNAL SOURCE
Model PT-102



SYNCHRONIZING GENERATOR
Model PT-101



PORTABLE TELEVISION
WAVE FORM MONITOR
Model T0-1



PICTURE MONITOR
Model M-105



REGULATED POWER UNITS

See for Catalog

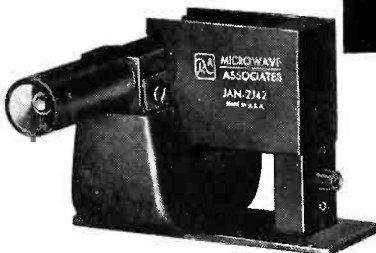
Metropolitan Avenue, Brooklyn 11, N. Y.

Brooklyn, N. Y.



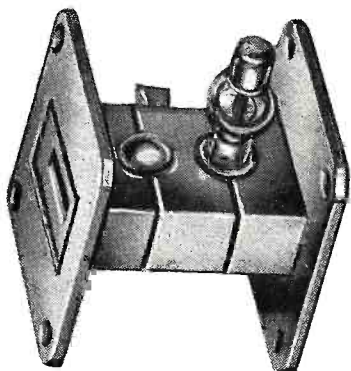
Chicago • Los Angeles • New York • Seattle • Ottawa, Can.

For MAXIMUM MICROWAVE PERFORMANCE



MAGNETRONS

Our MICROWAVE magnetron group produces many magnetron tubes ranging in power from one watt to the 300 kw peak. Our magnetrons incorporate the latest techniques including vacuum cast copper anodes, ceramic wherever possible, and superior new cathode materials. Write for quotations on your requirements. We now are in production on the types 2J42, 6027 (2J42A), 4J50, 4J52, 5789 and the ESM-48.



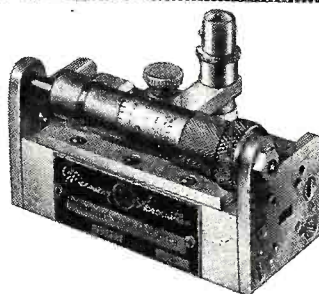
TR TUBES

We are producing a series of broad-band waveguide type TR tubes for use in radar duplexers. Long life, low leakage and VSWR, and short recovery time are intrinsic in the design of all of our tubes. We would be pleased to quote on the 1B63-A, 1B58, 5927, 5863 and similar types.



ATR TUBES

Representing a tremendous improvement over previous types, the new flange mounting 6276 and 6284 are now available either for retrofitting to existing X-band radars or for new designs. These types eliminate the arcing present in old resonant mounts and occupy less space.



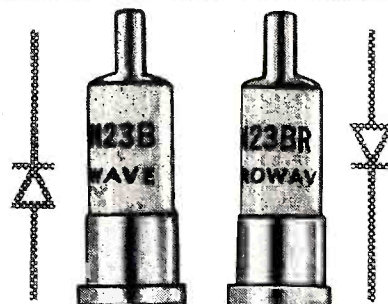
MILLIMETER TEST EQUIPMENT

MICROWAVE now produces a series of waveguide components and test equipment for the millimeter regions. We are expanding our production into the lower frequencies such as the popular X and S bands.



SILICON DIODES

MICROWAVE's new 1N23C low-noise X-band mixer diode represents the greatest improvement in this field since World War II. With suitable circuitry system noise figures of less than 10 DB can be realized. Close limits on RF and IF impedances are held in the manufacture of this diode. The 1N23C can be used in existing systems as a direct replacement for the 1N23B with often as much as 3 db gain in signal-to-noise ratio. MICROWAVE also manufactures in large quantity low cost JAN 1N23B, 1N21B, and 1N21C diodes.



BALANCED PAIRS

Two types of matched pairs are available for use in balanced mixers to reduce local oscillator noise contribution. The 1N23BM and 1N23CM are standard diodes matched within narrow limits for conversion loss, RF and IF impedance. The 1N23BMR and 1N23CMR are pairs with one unit of reversed polarity to allow for simplified mixer design.



OTHER DIODE TYPES

MICROWAVE is extending its new techniques to both mixer and video detectors for other frequencies. A series of coaxial types such as the 1N26, 1N78, and 1N53 will be available by late summer. The SD7000 is available for the 6500 mc region. Write for catalog 53S describing our Silicon Diode line in production.

Microwave
Associates, INC.

22 CUMMINGTON ST., BOSTON 15, MASS.

from AMPHENOL'S 5 PLANTS
 . . . precision-made components
 for the Electronics Industry

With its recent expansion of production facilities, AMPHENOL is supplying Radio-Electronics manufacturers quality electronic components in ever increasing amounts. AN Connectors, RF Connectors, RG Cables — all of the AMPHENOL products which have been confidently used by the industry for so many years—are more in demand today than ever before. Matching this mounting demand is the expanding production of AMPHENOL—production to better serve you.

Not only with those products already cataloged is AMPHENOL able to serve you. The AMPHENOL engineering staff is ready to assist you in the design and development of new products for special applications. Whether it is the engineering of a totally new component or the modification of an existing one, they will sit down with you and help plan the part that you have in mind.

AN CONNECTORS AMPHENOL is the leading manufacturer of AN Connectors. For use in critical power, signal and control circuits, these connectors fully meet government specifications. (In fact, prior to the issuance of MIL-C-5015, AMPHENOL AN Connectors incorporated many features requested by the specifications.)

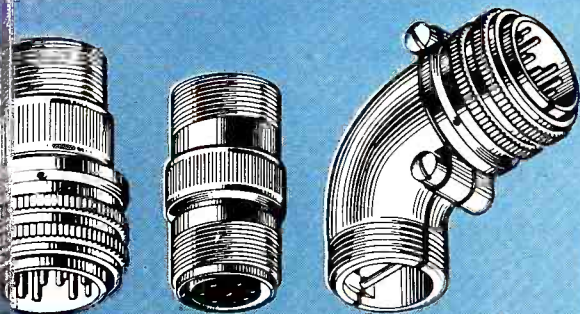
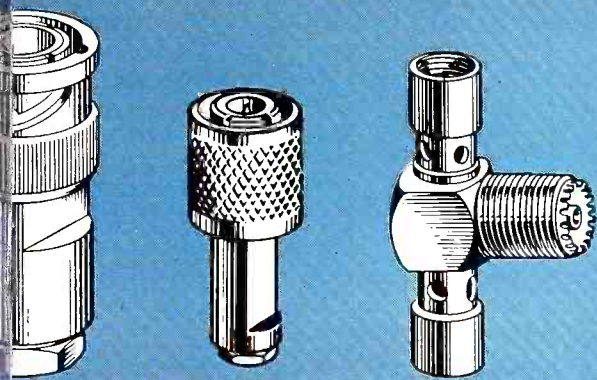
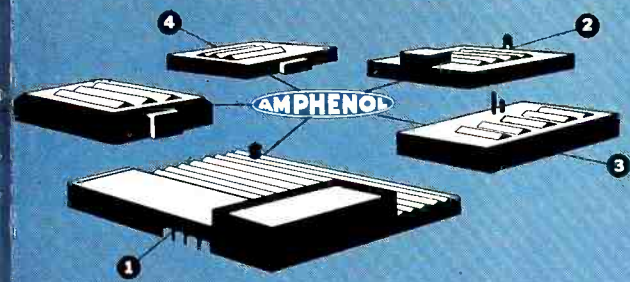
RF CONNECTORS AMPHENOL RF Connectors give never-failing continuity in the linking of coaxial cable. Available in several different types of construction, they have extremely low RF loss and a performance reputation for durability.

RG CABLES The expert engineering that went into the AMPHENOL RG Cables is reflected in their superior record of dependability and efficiency. Produced to rigid military specifications, strict end-to-end uniformity is just one feature of these remarkable cables. Utilization of polyethylene for most cable dielectrics and Teflon for high temperature applications insures peak performance.

AMERICAN PHENOLIC CORPORATION



chicago 50, illinois



CATALOGS For complete information on all AMPHENOL products, write for the B-2 catalog; for AN connectors only, the A-2; for RF Cables and connectors, the D-2.



CHATHAM

ELECTRONIC TUBES

Hydrogen Thyratrons

— for Pulse Voltage Generation



TYPE VC-1257

Hydrogen filled, zero bias thyatron with hydrogen generator for generation of pulse power up to 40 megawatts.



TYPE 5948/1754

Hydrogen filled, zero bias thyatron with hydrogen reservoir for generation of peak pulse power up to 12.5 megawatts.



TYPE 5949/1907

Hydrogen filled, zero bias thyatron with hydrogen reservoir for generation of peak pulse power up to 6.25 megawatts.

ELECTRICAL DATA*				
Type	VC-1258	5949/1907	5948/1754	VC-1257
Maximum Peak Forward Anode Potential	1000 volts	25000 volts	25000 volts	30000 volts
Maximum Peak Anode Current	20 amps	500 amps	1000 amps	2000 amps
Maximum Average Anode Current	0.05 amps	0.50 amps	1.0 amps	2.0 amps
Maximum Heating Factor (epy x prr x ib)	1.0×10^8	6.25×10^9	9.0×10^9	1.0×10^{10}
Nominal Filament Power	12.6 watts	95 watts	190 watts	380 watts
Hydrogen Reservoir	No	Yes	Yes	Yes

*More detailed information on electrical and mechanical data will be supplied on request.



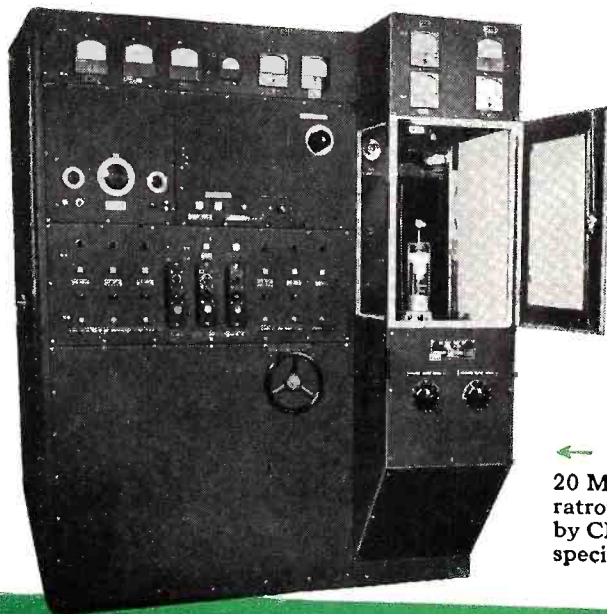
TYPE VC-1258

Zero bias miniature hydrogen thyatron for the generation of peak pulse power up to 10 KW.

● A NEW CONCEPT OF HYDROGEN THYRATRON DESIGN! The tubes illustrated represent a departure from conventional hydrogen thyatron designs and are a result of several years of concentrated development work.

They are primarily employed in the generation of peak voltages with durations in the order of microseconds.

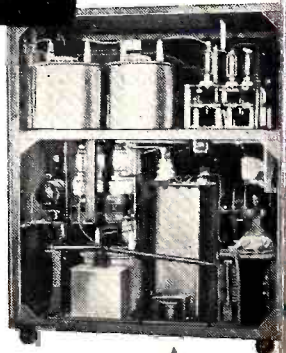
Custom-built Electronic Equipment



← 20 Megawatt Hydrogen Thyatron Test Equipment built by CHATHAM to customers' specifications.

● CHATHAM specializes in the development, design, and construction of custom-built electronic equipment to exactly meet customers' requirements. Our capable staff of engineers will furnish prompt estimates or, if desired, will call to discuss your problem personally. Call or write today.

→ Pulse life test equipment built by CHATHAM checks receiver type tubes under pulse conditions.



↑ 5 Megawatt radar modulator built by CHATHAM to rigid government standards.



ELECTRONICS

AND EQUIPMENT

Electronic Tubes

Ruggedized Type Tubes

• The following tubes fully conform to JAN specifications and can be supplied promptly, usually direct from stock:

5R4WGY	2D21W
6AL5W	OC3W
6H6WGT	OD3W
25Z6WGT	2050W

TYPE 395-A COLD CATHODE GAS TRIODE

Requires no filament supply and is used in many grid controlled rectifier and relay applications. Maximum D.C. anode current—10 ma. Maximum D.C. anode voltage—150 volts



TYPE 719-A HIGH VACUUM CLIPPER DIODE

This tube is used primarily for clipper diode service in hard tube modulator circuits. Filament 7 volts, 7 amps... Inverse peak anode voltage 25 kv, Max., peak anode current 10 amps, Max., anode dissipation 75 watts.

TYPE 1Z2 RECTIFIER

A small bulb high voltage vacuum rectifier. Low cathode heating power and low dielectric losses make tube suitable for radio frequency supply circuits. Filament 1.5 volts, .290 amps... Inverse peak anode voltage 20,000, average plate current 2 ma... peak plate current 10 ma.

TYPE 1B46 REGULATOR

A cold cathode glow discharge tube designed for voltage stability. DC operating voltage 82 volts, operating current range 1 ma minimum, 2 ma maximum. Regulation 3 volts.

TYPE 4B32 RECTIFIER

A rugged half-wave Xenon filled rectifier. Operates in any position throughout an ambient temperature range of -75°C to +90°C. Filament 5 volts, 7.5 amp... Inverse peak anode voltage 10,000 average anode current 1.25 amps.

TYPE 394-A THYRATRON

A Mercury vapor and Argon filled thyatron for grid controlled rectifier service. Operates over wide ambient temperature range. Heater 2.5 volts, 3.2 amps... Inverse peak anode voltage 1250, average anode current 640 ma.

TYPE 3B28 RECTIFIER

This rugged half-wave Xenon filled rectifier will operate in any position and throughout an ambient temperature range of -75°C to +90°C. Filament 2.5 volts, 5.0 amps... Inverse peak plate voltage 10,000, average anode current .25 amp.

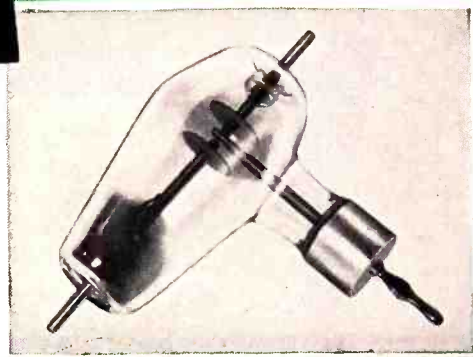
Chatham Vacuum Switches

SPECIFICATIONS

HOLD OFF VOLTAGE: Internal—10,000 volts rms; External* (at 27,000 feet altitude)—10,000 volts rms; External* (at 40,000 feet altitude)—7,500 volts rms.

INTERRUPTING RATING, RESISTIVE LOAD: 1,000 operations life at 10,000 v, ac, rms—10 amp, ac, rms; 1,000,000 operations life at 10,000 v, ac, rms—2 amp, ac, rms; 500,000,000 operations life at 10,000 v, ac, rms—0.1 amp, ac, rms.

NET WEIGHT (approx.).....2 ozs. MAXIMUM WIDTH (overall).....4 1/4 ins.
 MAXIMUM LENGTH (overall).....3 5/8 ins. MAXIMUM THICK. (overall).....1 1/8 ins.
 *at 50% humidity



HIGH VOLTAGE VACUUM FUSES

Can be supplied by Chatham to exact customers' specifications if ordered in adequate quantity. Call or write for full particulars and quotes.



CHATHAM ELECTRONICS CORP.

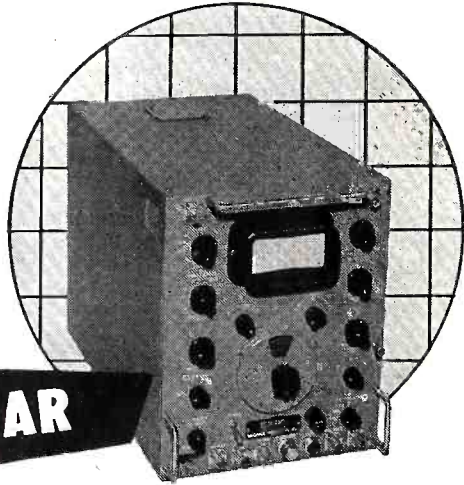
EXECUTIVE AND GENERAL OFFICES: LIVINGSTON, NEW JERSEY
 PLANTS AND LABORATORIES: NEWARK AND LIVINGSTON, NEW JERSEY



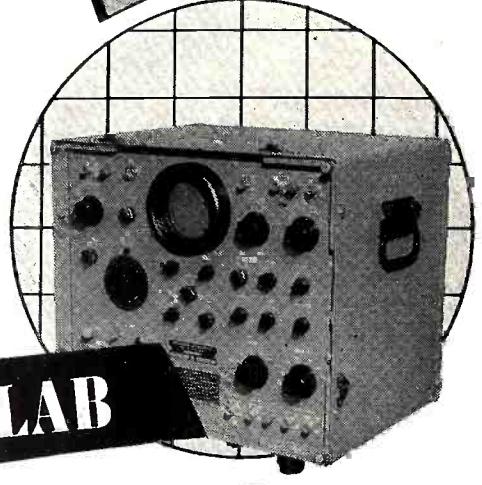
PULSESCOPE®

The Oscilloscope that portrays the Pulse by

Waterman



SAR



LAB

Classic Examples of Precision Engineering.

Investigations of complex waves take great strides forward when either a Waterman SAR or LAB PULSESCOPE is employed. Their compactness, portability and precision have established a new high in pulse measurement instruments for all electrical work. Each PULSESCOPE has internally generated markers which are synchronized with the sweep with the basic difference the sweep in the LAB PULSESCOPE initiates the markers while in the SAR PULSESCOPE it is the crystal controlled markers initiate the sweep. Power supply requirements of 50 to 1000 c.p.s. at 115 Volts permits operation almost anywhere.

The SAR PULSESCOPE, model S-4-A, is characterized by a pulse rise time of 0.035 microseconds thru a video amplifier with a sensitivity of 0.5 Volts p to p/inch. A vertical delay of 0.55 microseconds is optional. A and S sweeps covering a continuous range from 1.2 to 12,000 microseconds are augmented by R sweeps, which in turn are variable from 2.4 to 24 microseconds. A directly calibrated dial permits R sweep delay readings from 3 to 10,000 microseconds.

The LAB PULSESCOPE, model S-5-A, has equivalent time of 0.035 microseconds, a fixed 0.55 microseconds vertical delay and 0.1 Volts p to p/inch sensitivity, so arranged to assure portrayal of leading edges on displayed signals. A precision calibrated voltage is provided as well as optional sweep expansion of 10 to 1. A built-in test generator voltage is available for synchronizing any associated test equipment.



WATERMAN RAYONIC CATHODE RAY TUBE DEVELOPMENTS

Since the introduction of the Waterman RAYONIC 3MP1 for miniaturized oscilloscopes, scientists in our laboratories have diligently searched for more perfect answers to present day cathode ray tube problems. Such research led to the introduction of the revolutionary new 3SP and 3XP type cathode ray tubes. These tubes were designed with multi-trace oscilloscopy in mind. Every avenue of practical design was explored to produce tubes with bright, sharp traces and high deflection sensitivity at medium anode potentials.



TUBE	PHYSICAL DATA			TYPICAL VOLTAGES				DEFLECTION FACTOR V/IN.		MAX. VOLTS	
	Face	Length	Base	Anode # 3	Anode # 2	Anode # 1	Grid # 1	D1 to D2	D3 to D4	Anode # 3	Anode # 2
3JP	3 inch Round	10 inches	Medium Diheptal 12 Pin	3000	1500	300 to 515	-22.5 to -67.5	127 to 173	94 to 128	4000	2000
				4000	2000	400 to 690	-30 to -90	170 to 230	125 to 170		
3MP	3 inch Round	8 inches	Small Duodecal 12 Pin		1000	200 to 350	0 to -68	140 to 190	130 to 180		2500
					2000	400 to 700	0 to -126	280 to 380	260 to 360		
3SP	1 1/2 x 3 inches	9.12 inches	Small Duodecal 12 Pin		1000	165 to 310	-28.5 to -67.5	73 to 99	52 to 70		2700
					2000	330 to 620	-58 to -135	146 to 198	104 to 140		
3XP	1 1/2 x 3 inches	8.88 inches	Loctal		2000	400 to 690	-22.5 to -67.5	68 to 92	25 to 35		2700

Write for your complimentary subscription of "POCKETSCOOP" • OFFICIAL WATERMAN PUBLICATION

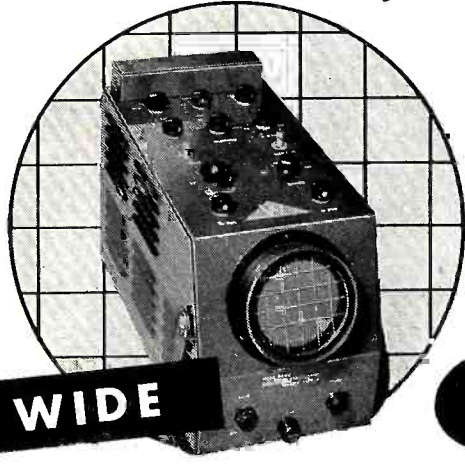
POCKETSCOPE®

Waterman

Pocket Oscilloscope by



HIGH



WIDE



TWIN

light... compact... accurate... portable

HIGH, WIDE and TWIN POCKETSCOPES have the "triple threat" of the oscilloscope industry. Small size, light weight and incredible performance, skyrocketed this team of truly portable instruments paralleled prominence. Each oscilloscope features DC amplifiers in both its vertical and horizontal channels. The **HIGH GAIN, S-14-A POCKETSCOPE**, has a sensitivity of 10 millivolts rms/inch, and a frequency response within -2 db from DC to 200 KC, while the **WIDE S-14-B POCKETSCOPE** is characterized by frequency response within -2 db from DC to 700 KC and a sensitivity of 50 millivolts rms/inch.

The **TWIN POCKETSCOPE** is essentially two **HIGH GAIN POCKETSCOPES** with individual cathode ray tubes, amplifiers, controls, but a common sweep generator. All these are endowed with many identical characteristics. Their sweep generators can be operated as triggered or repetitive over a frequency range from 0.5 cycles to 50 KC, with synchronization polarity optional. Return traces are blanked and provisions are made for modulating the intensity in each cathode ray tube.

Laboratory quality has not been sacrificed in order to accomplish portability and ruggedness. Investigate the many advantages of Waterman **POCKETSCOPES**.

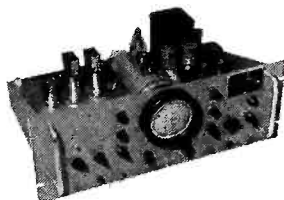
INDUSTRIAL POCKETSCOPE, S-11-A, has become America's popular DC coupled oscilloscope because of its small size, light weight, unique flexibility. This compact instrument has identical vertical and horizontal amplifiers which permit the operation of low frequency repetitive phenomena, while simultaneously eliminating undesirable trace bounce. Each channel sensitivity is 0.1 Volt rms/inch. Frequency responses are likewise identical, within -2 db from DC to 200 KC.

INDUSTRIAL POCKETSCOPE



S-11-A

RAKSCOPE®



S-12-B

The **S-12-B RAKSCOPE** is a rack mounted, JANized version of the famous Waterman **S-11-A POCKETSCOPE**, with the addition of a triggered sweep and a special calibrating circuit for rapid frequency comparisons. The entire oscilloscope is built to occupy but seven inches when mounted in a standard relay rack.

Because provisions are made for applying input signals from the rear, as well as the front, the **S-12-B** is the ideal combination, systems monitor and trouble-shooting oscilloscope. Investigate the multiple applications of this instrument as an integral part of your own rack mounted apparatus.



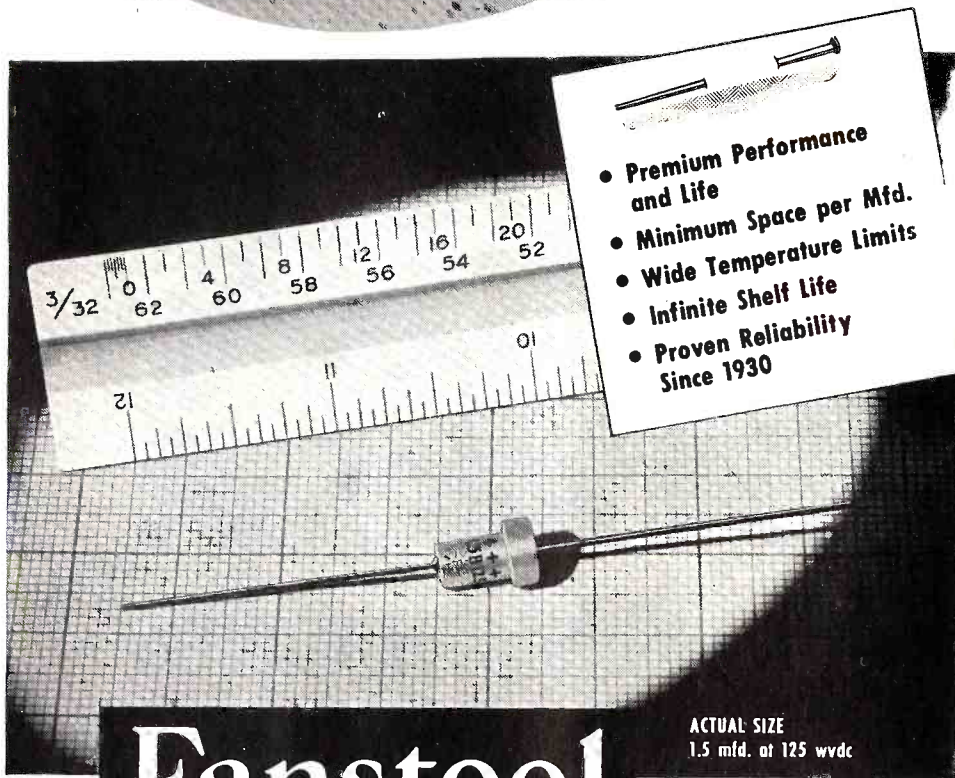
WATERMAN PRODUCTS CO., INC.

PHILADELPHIA 25, PENNA., U. S. A.

CABLE ADDRESS, POKETSCOPE, PHILA.

Manufacturers of **POCKETSCOPES®** • **RAKSCOPES®** • **PULSESCOPES®** and **RAYONIC TUBES®**

TANTALUM CAPACITORS ARE BASIC in current electronic trend.....

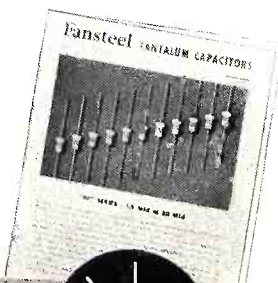


Fansteel

TANTALUM CAPACITORS

Now, through the use of tantalum, new high standards of electrolytic capacitor performance are available. The tantalum oxide film is the most stable dielectric, chemically and electrically, yet discovered. As a result, Tantalum Capacitors offer advantages not found in any other electrolytic type—long life, space saving, wide temperature range, excellent frequency characteristics, no shelf aging.

Tantalum Capacitors are made by Fansteel and other leading capacitor manufacturers. Ask for current information bulletins on Fansteel Tantalum Capacitors.

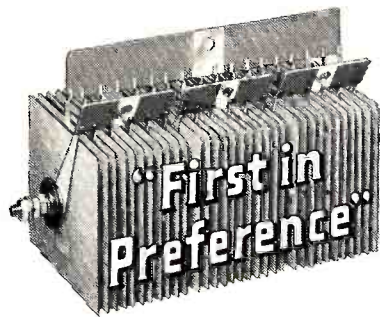


FANSTEEL METALLURGICAL CORPORATION

NORTH CHICAGO, ILLINOIS, U. S. A.

Tantalum Capacitors... Dependable Since 1930

Fansteel SELENIUM RECTIFIERS



Fansteel Selenium Rectifiers are produced from top quality materials of the highest purity. They are made in a modern plant where adequate quality control safeguards form an integral part of every operation. Each Fansteel Selenium Rectifier is exactly assembled from carefully matched cells and rigidly inspected.

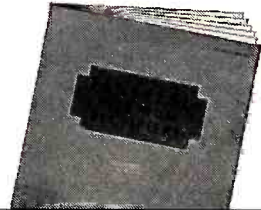
Fansteel Selenium Rectifiers are both rugged and compact. Aluminum base plates of ample thickness prevent distortion or warping... all insulation is heavy, all hardware strong. Each stack is coated, in manufacture, with one of three standard Fansteel finishes to withstand the most adverse atmospheric conditions under which it is expected to operate.



Fansteel Selenium Rectifiers rate high on a "more service per dollar" basis, too. They have a practically unlimited life. They do not deteriorate when idle. They entail no maintenance expense whatever. Yes, on any basis, you'll find them the *right* rectifier for your products.



WRITE FOR THIS LITERATURE



Dependable Rectifiers Since 1924

TRANSISTORS AND DIODES

POINT-CONTACT AND JUNCTION

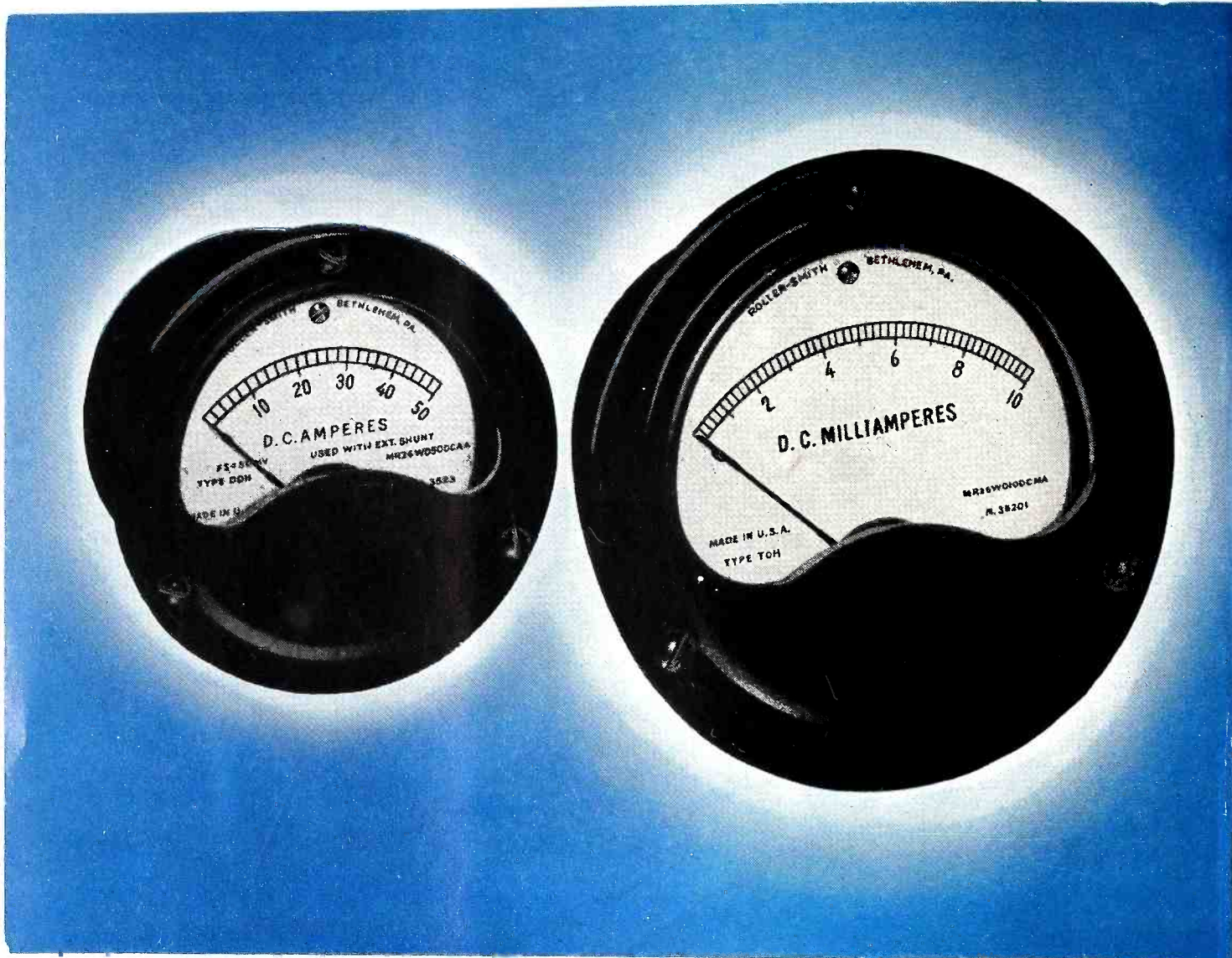


FOR CIVILIAN AND MILITARY APPLICATION

NATIONAL UNION RADIO CORPORATION

HATBORO, PENNSYLVANIA

USES: TV PICTURE; TV & RADIO RECEIVING; SPECIAL PURPOSE; OSCILLOSCOPE, RADAR & SPECIAL PURPOSE CATHODE RAY • ELECTRON TUBE RESEARCH • SPECIALIZED TUBE & TRANSISTOR TESTING EQUIPMENT



Roller-Smith Ruggedized Instruments

Shock-Proof • Vibration-Proof • Weather-Proof

Roller-Smith announces production of hermetically sealed *Ruggedized* 2½" and 3½" instruments conforming to MIL-M-10304.

In addition to *Ruggedized* instruments, a complete line of hermetically sealed and unsealed types in conformance with Government specifications are available.



ROLLER-SMITH CORPORATION
BETHLEHEM, PENNSYLVANIA

because
PERFORMANCE
 is your objective
 select **AIRPAX** products

MINIATURE CHOPPER



C747
 midget 400 cycle, 6 volt,
 65° angle, 7 pin base.

CHOPPERS



A589
 ... extremely rugged,
 6 volts, 400 cycles.



A580
 120 volts, 400 cycles,
 0° or 80° to 90° angle.

MAGNETIC MODULATOR



A1314 modulates low
 level DC error signals
 without moving parts.

VIBRATOR INVERTER



A702
 heavy duty miniature,
 400 cycles, 110 volts.

VIBRATOR POWER SUPPLY



A1220
 6, 12 or 24 volts DC to
 150 volts ma, 15 watts.

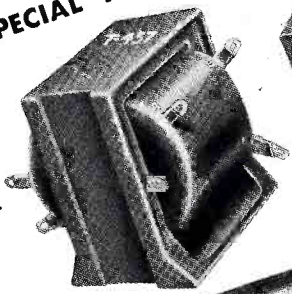
VIBRATOR INVERTER



A512
 spectacularly small, 110
 volts, 400 cycles AC, 15 W.

SPECIAL TRANSFORMER DESIGNS

Fosterite sealed trans-
 formers for meeting
 MIL-T-27. Much
 lighter and smaller.



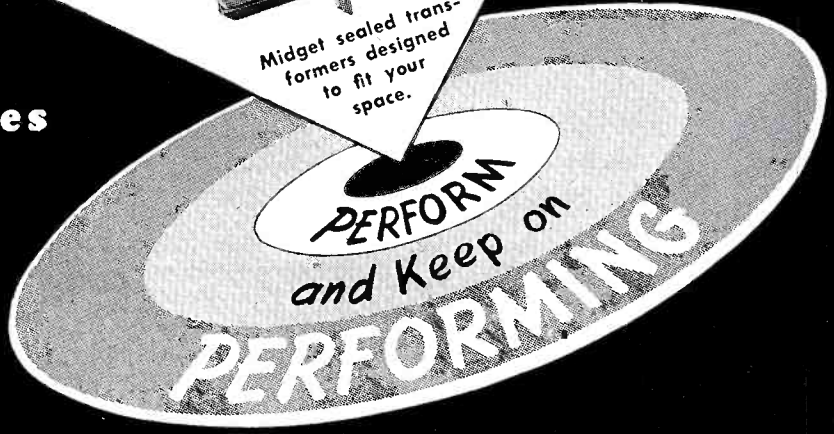
Metal sealed trans-
 formers meeting
 MIL-T-27. Superior
 design and quality



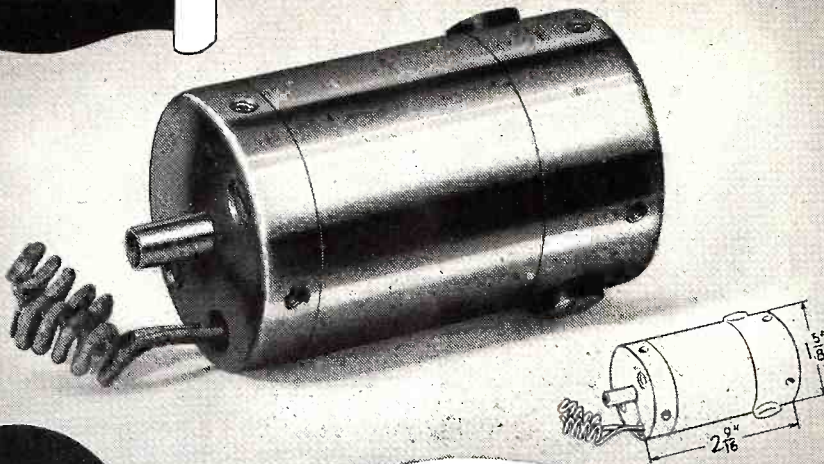
Midget sealed trans-
 formers designed
 to fit your
 space.

- Choppers
- Vibrators
- Vibrator Inverters
- Vibrator Power Supplies
- Magnetic Modulators
- Transformers

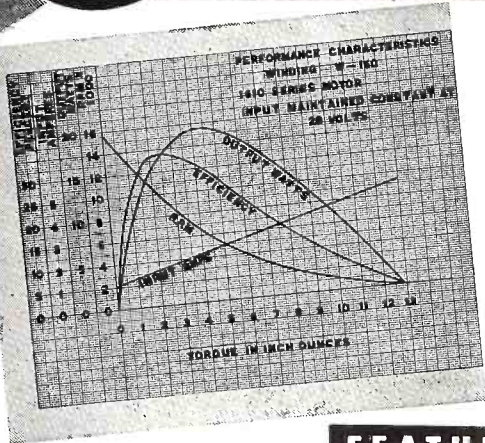
for complete specifications



MOTOR DATA
No. 125



1600 FRAME MOTOR
Torque 4.5 in. oz. at 5800 RPM



The power output of this precision motor is exceptionally high in proportion to its light weight and small size. Originally developed for numerous aircraft and portable applications, the characteristics of its performance can readily be modified for a variety of new uses.

FEATURES

ELECTRICAL MECHANICAL

- | | |
|-------------------------------|-------------------------------|
| Series or shunt wound | Completely enclosed |
| Unidirectional or reversible | Adaptable for any mounting |
| High starting torque | Laminated field poles |
| Low starting current | Stainless steel shaft |
| Low RF interference | Two precision ball bearings |
| Armature and field windings | Mica insulated commutator |
| Varnish impregnated and baked | Permanent end play adjustment |

1600 FRAME MOTORS		Series	Shunt
Watts Output, Int.	(max.)	22	
Watts Output, Con.	(max.)		5
Torque at 8500 RPM	(in. oz.)	3	
Torque at 5800 RPM	(in. oz.)	4.5	1
Lock Torque	(in. oz.)	12	3
Volts Input	(min.)	5	5
Volts Input	(max.)	32	32
Shaft Diameter	(max.)	.250"	.250"
Temperature Rise		50°C.	40°C.
Weight		12 oz.	12 oz.

Eicor, Inc. 1501 W. Congress St., Chicago 7, Illinois
DYNAMOTORS · INVERTERS · ELECTRONIC CONTROLS · ALTERNATORS · MOTORS

Ready reference throughout the year... this Mid-June issue of electronics serves the industry in the exacting manner that it requires.

The **electronics BUYERS' GUIDE**

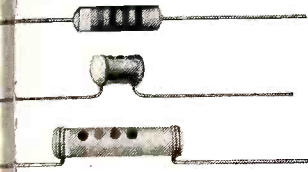
provides users with the only accurate and reliable product source available in the electronic industry...

They refer **FIRST** to the "GUIDE."

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at Every Demand for Reliability, Performance, Economy

ERIE TUBULAR CERAMICONS*



Erie "GP"* Molded Insulated Ceramicons
5 MMF—5,000 MMF

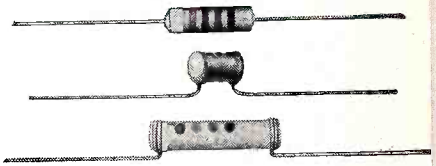
Erie "GP" Dipped Insulated Ceramicons
5 MMF—5,000 MMF

Erie "GP" Non-Insulated Ceramicons
5 MMF—5,000 MMF

Temperature Compensating
Molded Insulated Ceramicons
0.5 MMF—550 MMF

Temperature Compensating
Dipped Insulated Ceramicons
0.5 MMF—1,800 MMF

Temperature Compensating
Non-Insulated Ceramicons
0.5 MMF—1,800 MMF



ERIE CERAMICON TRIMMERS



Style 557



Style 3130



Style TS2A

1.5-7 MMF 5-30 MMF
3-12 MMF 8-50 MMF
5-25 MMF 65-95 MMF
150-190 MMF

1.5-7 MMF 5-20 MMF
3-12 MMF 4-30 MMF
3-13 MMF 7-45 MMF



Style 531 and 532
0.5-5 MMF
1-8 MMF



Style 535
0.7-3.0 MMF

Style 3115
0.5-3.0 MMF
1.0-4.0 MMF
Style 3139
2.0-6.0 MMF



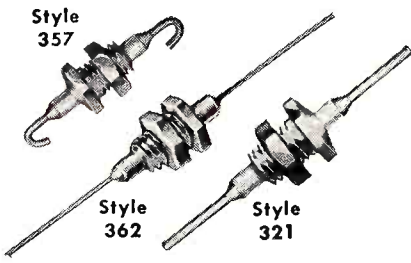
Style 3132
1.0-3.8 MMF

ERIE FEED-THRU CERAMICONS



Style 2404

Style 2405



Style 357

Style 362

Style 321



Style 2416

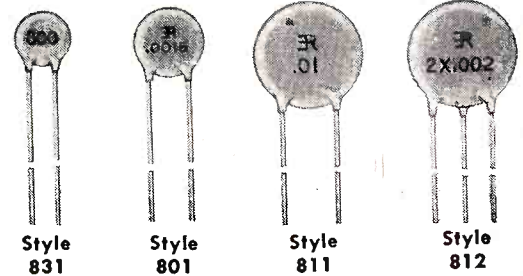


Style 2418

5 MMF—1,000 MMF
5 MMF—1,500 MMF

ERIE DISC CERAMICONS

Temperature Compensating, By-Passing, and High Voltage



Style 831

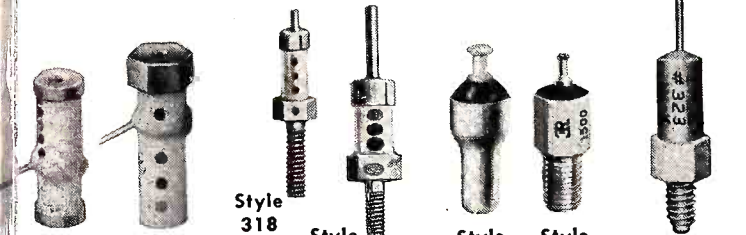
Style 801

Style 811

Style 812

Up to .01 MFD

ERIE STAND-OFF CERAMICONS



Style 2322

Style 2336

Style 318

Style 319

Style 325

Style 326

Style 323 and 324

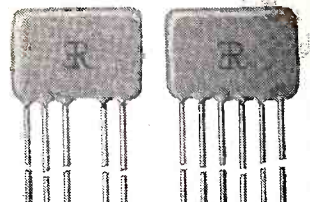
5 MMF—5,000 MMF

ERIE BUTTON* MICA CAPACITORS



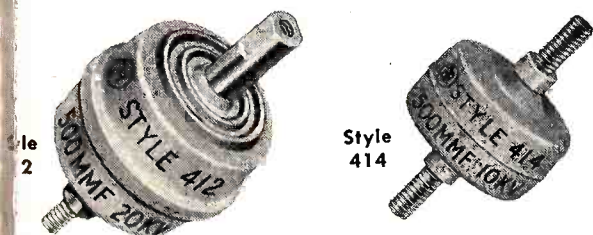
15 MMF—6,000 MMF

ERIE PRINTED CIRCUITS



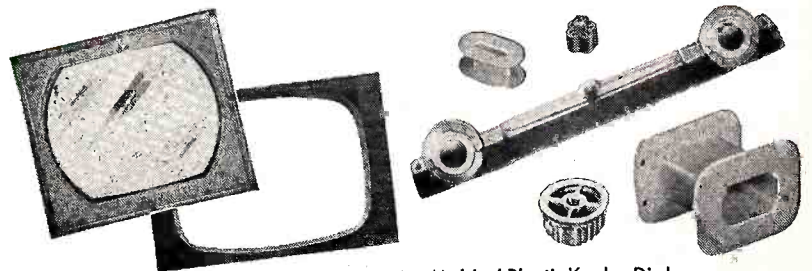
Standard, Integrator, Filter, and Coupling Circuits

ERIE HIGH VOLTAGE CERAMICONS



10 and 20 KV.—500 MMF

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Custom Injection Molded Plastic Knobs, Dials, Bezels, Name Plates, Coil Forms, etc.

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ERIE RESISTOR CORPORATION . . . ELECTRONICS DIVISION

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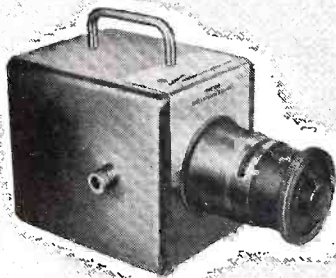
Factories: ERIE, PA. • LONDON, ENGLAND • TORONTO, CANADA

When you *TEST*, use the *BE*

THE SYMBOL OF QUALITY, ACCURACY, DEPENDABILITY

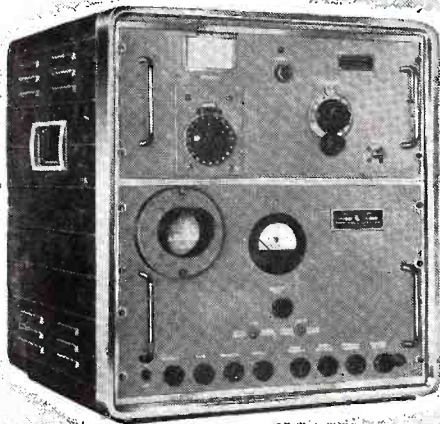
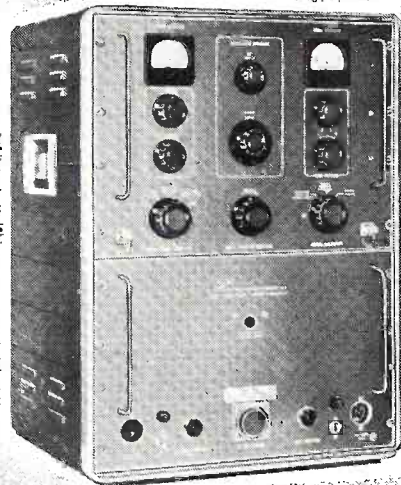


The equipments illustrated are typical examples of the complete line of PRD quality test components. Rigorously engineered and meticulously manufactured to the highest attainable standards, these units are now standard equipment in many of the leading research and development laboratories throughout the world. In addition to the widely diversified standard equipments offered, PRD maintains a highly qualified staff for special products development. This staff is at your service at all times for consultation.



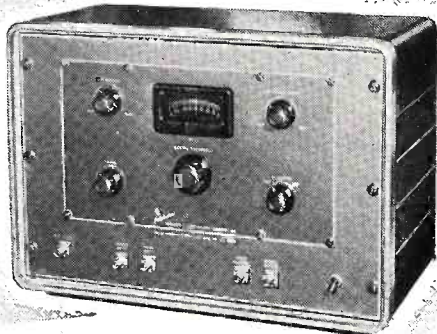
**Type 587
UHF
FREQUENCY
METER**
470-900 mc/s

**Type 801-A
UNIVERSAL
KLYSTRON
POWER
SUPPLY**
300-1500 V
at 65 ma;
1.5-3.6 KV
at 25 ma

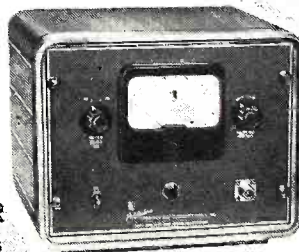


**Type 854
UNIVERSAL
SPECTRUM
ANALYZER**
8.5-9.6 kmc/s

**Type 907
BROADBAND
SWEEP
FREQUENCY
GENERATOR**
40-900 mc/s



**Type 904
VHF-UHF
NOISE
GENERATOR**
.01-1.0 kmc/s



**Type 275
VOLTAGE STANDING
WAVE RATIO AMPLIFIER**
300-3000 cps



FREQUENCY MEASURING DEVICES

Frequency Meters	Frequency Range (kmc/sec)	Type No.	Transmission Line Size (Nominal O.D.—inches)	R—Re T—Trans
General Purpose	0.47-0.95	587	3/8	
	2.40-3.40	583	3/8	
	4.00-10.0	562-A	3/8	Dete inclu
	3.95-5.85	574	2 x 1	R
	5.85-8.20	575	1 1/2 x 3/4	R
	7.05-10.0	576	1 1/4 x 5/8	R
	8.2-10.0	585-A	1 x 1/2	R
	8.2-10.0	585-B	1 x 1/2	T
	8.2-10.0	586-A	1 1/4 x 5/8	R

In addition to the General Purpose Frequency Meters listed above, PRD manufactures a complete line of Precision Frequency Meters covering the entire frequency range from 0.55 to 39.0 kmc/s. Transmission line sizes include 3/8" coaxial line and standard wave guide sizes from 0.280" x 0.140" I.D. to 2" x 1" O.D. All types are available in Reaction and Transmission styles.

The Type 500 Frequency Standard Multiplier is available to generate standard frequency signals in the UHF and microwave regions when used with the Type 612 Tunable Crystal Mount.

SIGNAL SOURCES AND RECEIVERS

ITEM	DESCRIPTION
TUBE MOUNTS Type 701 Type 702 Type 703	For type 2K28 klystrons, 2.400-3.445 kmc/sec For type 2K25 klystrons, 8.50-9.60 kmc/sec, 1 1/4 x 5/8 wave For type 2K25 klystrons, 8.50-9.60 kmc/sec, 1 x 1/2 wave
OSCILLATORS Type 705 Type 706	Covering the frequency range from 7.0 to 11.0 kmc/sec Covering the frequency range from 3.6 to 7.3 kmc/sec
POWER SUPPLIES Type 801-A	Providing all required electrode voltages to operate a wide range of klystrons, plus internal modulators
SPECTRUM ANALYZERS Type 853 Type 854 Type 855	Covering the frequency range from 2.40 to 3.40 kmc/sec Covering the frequency range from 8.50 to 9.60 kmc/sec Combining both of the above ranges in one instrument
GENERATORS Type 902 Type 903 Type 907	Covering the frequency range from 3.65 to 7.30 kmc/sec Covering the frequency range from 7.00 to 10.5 kmc/sec Covering the frequency range from 40 to 900 mc/sec
NOISE GENERATORS Type 904	For the direct measurement of noise factors in the range of 10 to 1000 mc/sec



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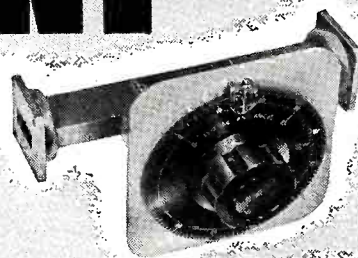
from VHF through EHF

PRECISION RF TEST EQUIPMENT

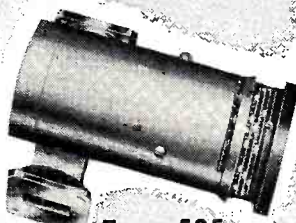
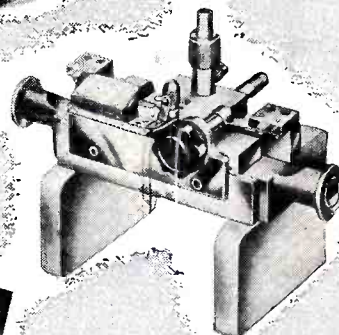
Type 312
E/H TUNER
26.5-40.0 kmc/s



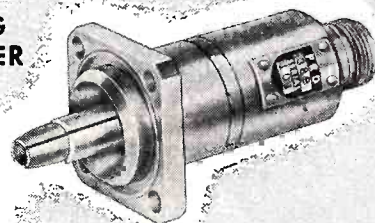
Type 196-B
VARIABLE
ATTENUATOR
8.20-12.4 kmc/s
0-40 db



Type 211
PRECISION WAVEGUIDE
SLOTTED SECTION
18.0-26.5 kmc/s

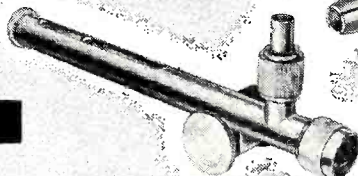


Type 585
DIRECT READING
FREQUENCY METER
8.20-10.0 kmc/s

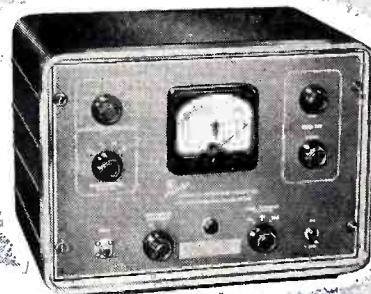


Type 389
COAXIAL
TRANSMISSION
LINE ADAPTER
0-4.0 kmc/s

Type 612-A
CRYSTAL BOLOMETER
MOUNT
1.00-12.4 kmc/s



Type 650-A
UNIVERSAL
POWER BRIDGE
0.1, 1.0, 10, 100
mw full scale



AND NOW IN PRODUCTION!
PRD Magnetic Amplifiers

Our Magnetic Amplifier Division is now in production to meet your needs with custom designs or "packaged" units. The T806 is a low level amplifier which will amplify a signal from a thermocouple, strain gauge, thermistor bridge, photo tube, etc., to operate an insensitive meter or relay.



ATTENUATORS AND TERMINATIONS

	COAXIAL (Nom. O.D.-in.)		TRANSMISSION LINE SIZE							0.622x 0.311 I.D.	0.420x 0.170 I.D.	0.280x 0.140 I.D.
	3/8	1/2	WAVEGUIDE (Nominal O.D.-inches)									
			3x1 1/2	2x1	1 1/2x3/4	1 1/4x3/8	1x1/2					
rs ted			171	162	1156 161	160	154-A 159	189	190	191		
			174-A	169-B	177-B	184-A	196-C 196-D	187				
			175-B	170-A	178-B	185-B	195-B	188-A	153-A	192		
		181,198					180					
rs r	136 series	130 series 1100-C	s	s	s	s	140 series	s				
ns	145	139	129	115	121	114	116	131	132	133		

TRANSMISSION LINE COMPONENTS

to										
rs	389,390 391,392	389,390 391,392	365	357	356	355	354-A			
				400	404	401	402	405		
			375-A	376-A	377-A	378-A	379-A	386-A	387-A	388-A
t & mbles			369-A	369-B	369-B	369-C	369-D	369-E	f	f
Tees			s	s	s	s	462 465 481	s	s	s

IMPEDANCE MEASUREMENT & TRANSFORMATION

itions	200-C	205-A 215-A	209-A	201-A	204-A	202-A	203-A	210 311	211	212
		306	309	300	305	302	303-A	314	313	312

The Type 250-A Broadband Probe is designed for use with the Types 200-C through 209-A and 215-A Slotted Sections; Types 210-212 are supplied with built-in tunable probes. The Type 361 R-F Adapter is available for use with the Type 250-A Probe.

DETECTION AND POWER MEASUREMENT

ounts		612-A 613				601	616	621	615
r	(s)	612-A,613 627-A,628-A					616	621	618
DR						635			

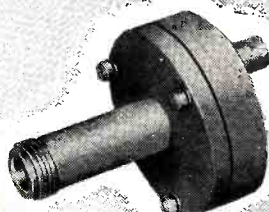
The Type 650-A Universal Power Bridge is designed to be used with any of the bolometers or thermistors listed for the measurement of absolute power level.

BOLOMETERS

FOR USE WITH	TYPE No.	FOR USE WITH	TYPE No.	FOR USE WITH
250-A, 612-A, 613	629-A(s)	623(s)	630-B(s)	626(s)
210, 211, 616, 621	629-B(s)	624(s)	631-C	627-A
212, 618, 620	630-A(s)	625(s)	631-D	628-A

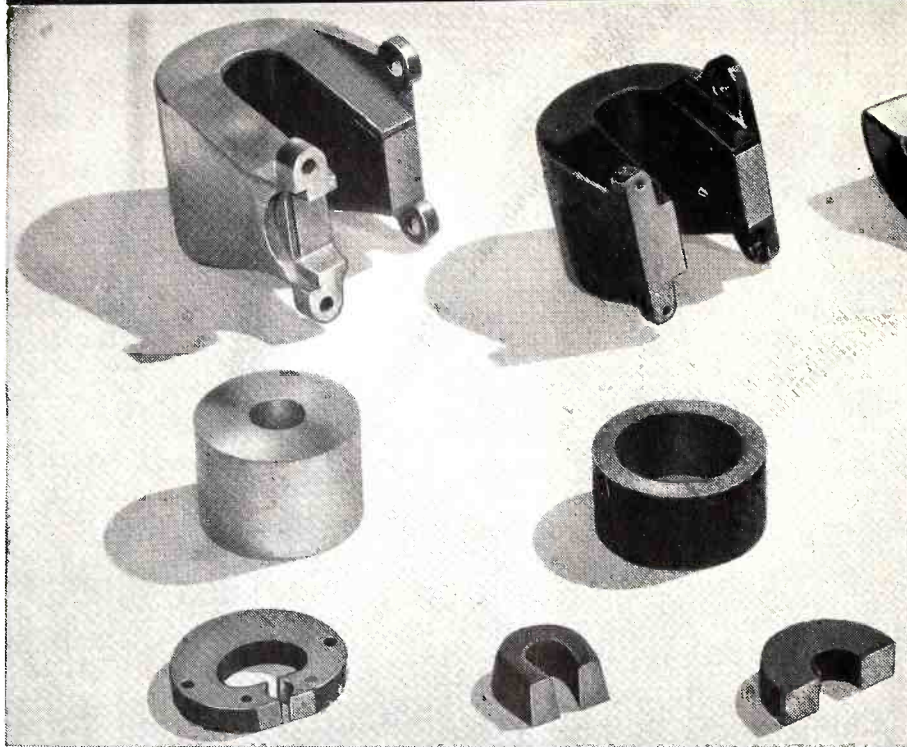
ent is supplied with captive flange screws
le on special order only

Type 627-A
BROADBAND COAXIAL
BOLOMETER MOUNTS
.5-10.0 kmc/s



INDIANA

PERMANENT MAGNETS



All materials . . . all sizes . . . all shapes . . .

Look to INDIANA for quality permanent magnets — for skill in manufacture — for cost-cutting engineering aid. Strict supervision in every step of production is your assurance of exact magnetic and mechanical characteristics.

Complete Engineering Service

Indiana offers a complete engineering service to help select the best permanent magnet for your application. Backed by years of research and experience gained in the development of thousands of magnetic designs, Indiana engineers have the "know-how" to select the best permanent magnet material and to properly design the magnet. This service involves no obligation on your part.

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Write for this handy reference book full of detailed permanent magnet information. Ask for Catalog No. 11—Y.

MATERIALS

Indiana's wide variety of magnet alloys permits precise selection.

HYFLUX Alnico V
Cast Alnico
Sintered Alnico
Cunife

Cunico
Chrome Steel
Cobalt Steel
Tungsten Steel

FOR ALL APPLICATIONS

Indiana Permanent Magnets provide uniform high energy for:

RADAR MAGNETRONS

All types and sizes, horns, "U's" and "E's". Indiana quality insures a strong, uniform magnetic field.

LOUDSPEAKER MAGNETS

Indiana Hyflux Alnico V speaker magnets offer a guaranteed energy product of 5 1/4 million BHmax as contrasted with an industry minimum of 4 1/2 million.

MAGNETS FOR METERS, INSTRUMENTS AND CONTROLS

A complete variety for ammeters, indicating instruments, galvanometers, switches, etc.

TV FOCUS COIL MAGNETS

All types and sizes of segmented rings, thin wall rings, etc. for focus coils, ion traps and centering devices.

MAGNETS FOR MOTORS, GENERATORS AND MAGNETOS

Rotors and assemblies in all grades of Alnico.

SEPARATOR MAGNETS

Magnets for all types of industrial processing . . . from pulley separators to can-making machinery.

**INDIANA
PERMANENT
MAGNETS**

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SPECIALISTS IN "PACKAGED ENERGY" SINCE 1908

Glass to Metal Vacuum Seals



Constantin's latest achievement —

Glass to metal vacuum sealed transistor mounts that provide complete protection from moisture, dust, varying heat conditions and shock. Germanium can be sealed in vacuum or inert gas. A special soldering moat is a feature for easy assembly. Leads are spaced to fit standard sub-miniature sockets and can be supplied 1½" long for soldering directly to circuits.



AN CONNECTORS

Precision construction throughout. Glass to metal vacuum seal assures protection against varying atmospheric conditions. Available in most JAN specifications.



MULTIPLE HEADERS

Plug and standard types. Built to withstand thermal shock and provide stabilized atmospheres. Available in various configurations.



SINGLE TERMINALS AND END SEALS

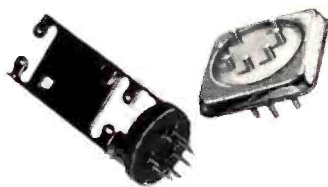
Terminals available in all combinations of hooks, eyes, tubes, and pierced flats. Test rated from 1,000 to 15,000 volts R.M.S. and 5 to 25 amps. Single end seals available in various sizes for items requiring stabilized atmospheres.

HIGH COMPRESSION SEALS AVAILABLE



CRYSTAL HOLDERS

The highly rigid metal bridge unit is designed to withstand severe strain without deformation. The one piece sealing medium minimizes stresses on the pins which could produce internal strain.



CUSTOM ENGINEERED COMPONENTS

Constantin is capable of manufacturing any glass to metal sealed requirement. Free engineering assistance given upon request.

Hot tin plating at 530 F. facilitates easy soldering, thereby eliminating rejections during assembly. Special plating supplied on request. Glass to Kovar seals, made under Westinghouse patents, are ideal for use in extreme temperatures. Blueprints can be furnished upon request.



L.L. Constantin & Co.

MANUFACTURING ENGINEERS

Rt. 46 and Franklin Avenue Lodi, N. J.

A completely self-contained company equipped with the most modern machine shop and facilities for die construction, stampings, bending, and wire cutting. Also a Glass Department capable of compounding, labeling and sintering. Latest ovens and furnaces for fusing. Advanced plating techniques. Skilled Engineering. These combined features enable us to provide a **TOP QUALITY** product completely manufactured on our premises. Product or sample delivery can be made almost immediately.

VACUUM COATING EQUIPMENT

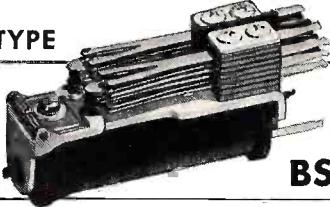
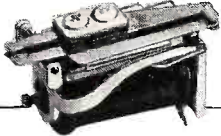




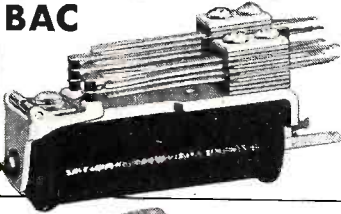

COMBINATION BASE AND FINAL FREQUENCY CALIBRATION PLATING MACHINE FOR QUARTZ CRYSTALS — Model 3

Precision equipment designed to deposit micro-tolerance film of metal (gold, silver, platinum, etc.) on quartz crystal oscillator plates. Operates at vacuum of less than 1/100 micron.

MANIFOLD TYPE FINAL FREQUENCY CALIBRATION UNIT TYPE FFO — Model 4

Unit is engineered to calibrate one crystal every 15 seconds with vacuum of less than ½ micron. May be bench mounted in multiples.

INDUSTRIAL TYPES OF Sterling RELAYS

TYPE	DESCRIPTION	COILS	PILE-UP	SIZE*
 BS	The standard long coil telephone type with twin contacts. Also available with a variety of single contacts.	Single and double wound to 52,000 ohms	Max. of 28 springs in two pile-ups	4 1/8" long 1 1/2" wide 1 1/6 - 2 3/4" high
 GS	The short form telephone type with single contacts of various sizes and metals.	Single and double wound to 25,000 ohms	Max. of 20 springs in two pile-ups	2 1/2" long 1 1/4" wide 1 5/8 - 2" high
 KS	The miniature type for aircraft and similar applications. Reed bearing support provides extreme life and speed. Not recommended for marginal current applications.	Single to 6500 ohms	Max. of 12 springs in two pile-ups	1 1/2" long 3/8" wide single arm 1" wide double arm 1 1/8 - 1 7/16" high
 LS	The miniature type B, applicable where space is a premium and large pile-ups or greater sensitivity than the KS or TS are required. Available with either single or twin contacts and a variety of mountings.	Single and double wound to 20,000 ohms	Max. of 20 springs in two pile-ups	2 1/4" long 1 1/8" wide 1 3/16 - 1 3/4" high
 TS	Similar to the type KS with increased coil capacity and larger spring pile-up. Mounts in most of the same enclosures designed for the type KS.	Single and double wound to 14,000 ohms	Max. of 18 springs in two pile-ups	1 3/8" long 1" wide 1 1/4 - 1 25/32" high
 RS	The Radio Sonde Relay.	Single to 5,000 ohms	1C with armature common to frame	1 1/16" x 1 1/2" x 2 3/8"
 BAC	The AC modification of type BS. An ideal multi-contact type of AC relay where only AC coil power is available.	To 220 volts 25 & 50/60 cycles Single and double wound	Max. of 18 springs in two pile-ups. Less on low voltages	Same dimensions as Type BS
 GSA	The AC modification of type GS where space will not permit the use of the type BAC.	To 220 volts 25 & 50/60 cycles	Max. of 18 springs in two pile-ups. Less on low voltages	Same dimensions as the type GS
HERMETICALLY SEALED TYPES	Sealed enclosures for STERLING relays are available in a variety of enclosure and header types.			
PLUG-IN TYPES	All STERLING relays may be furnished mounted on and wired to the common varieties of radio plugs.			
SNAP-ACTION	The types BS and GS and their variations are available with snap action switches as well as conventional contact springs.			
SPECIALS	A wide variety of special variations of all STERLING relays is available for the unusual application.			
MOUNTINGS	L type brackets and dust covers for the type BS. Dust tight enclosures for the types GS and LS. Mounting strips and covers for types BS and LS to fit standard 19" relay racks.			

* Where two dimensions are given for height, the smaller is for relays with 2 springs and the larger is for the maximum size pile-up.

CATALOG ON REQUEST

Sterling Engineering Co., Inc.

54 MILL STREET
LACONIA 9, N. H.

Subsidiary of AMERICAN MACHINE AND FOUNDRY COMPANY, New York

NEW LOW COST PG* SERIES

MERCURY

CONTINUOUSLY VARIABLE — WIDE RANGE D.C. REGULATED POWER SUPPLIES

Compact, Portable, Easy to Use
Basic Instruments For Laboratory or
Production Tests

Mercury Electronic Company, backed by twelve years of engineering and production experience in the regulated power supply field, presents five new instruments which should be of wide interest to engineers, researchers, technicians and production personnel.

For some time we have felt that a need existed for a laboratory type, low cost, continuously variable regulated power supply which would be small, light, reliable and yet contain the exacting features of our standard line. (Write for complete catalog). Without sacrificing performance or quality in any respect, the PG series has been designed.

The PG series contain the highest quality components, GR Variac control, latest tubes, terminal board construction, aluminum carrying case with handle, etc. Frankly, it is difficult to describe in detail the fine performance and specifications for the PG series in this space. So why not write for our complete catalog now coming off the press. It will cover the PG series as well as other regulated power supplies and equipment now available.

CONTINUOUSLY VARIABLE
COMPLETELY NEW CIRCUITS
PRECISE REGULATION
HIGH STABILITY
CONSERVATIVELY RATED
COMPACT, LIGHTER
PROMPT DELIVERIES
LOWER PRICES

BRIEF SPECIFICATIONS PG* SERIES REGULATED POWER SUPPLIES

Mercury Model	Output Voltages	Current Range	Input Voltages	Regulation	Ripple	Size	Meters	Net Price
PG-501A	0-500VDC 0-150VDC Bias 6.3 Vac.	0-150 Ma.DC 0-5 Ma.DC 6 amps	105-125 AC 50-60~	.5% from 10-500 VDC	Less than 5 Millivolts at Full Load	D- 13 1/4" W-8 1/4" H- 9"	Multi-Range Reads D.C. volts and D.C. Mils.	\$165.00
PG-502A	0-500VDC 0-150VDC Bias 6.3 Vac.	0-150 Ma.DC 0-5 Ma.DC 6 amps	105-125 AC 50-60~	.5% from 10-500 VDC	Less than 5 Millivolts at Full Load	D- 13 1/4" W-8 1/4" H- 9"	0-500 VDC 0-15 Ma.DC	\$185.00
PG-601A	0-600VDC 0-150VDC Bias 6.3 Vac.	0-200 Ma.DC 0-5 Ma.DC 6 amps	105-125 AC 50-60~	.5% from 10-600 VDC	Less than 5 Millivolts at Full Load	D- 13 1/4" W-10" H- 9"	Multi-Range Reads D.C. volts and D.C. Mils.	\$210.00
PG-701A	0-600VDC 0-150VDC Bias 6.3 Vac.	0-300 Ma.DC 0-5 Ma.DC 10 amps	105-125 AC 50-60~	.5% from 10-600 VDC	Less than 5 Millivolts at Full Load	D- 13 1/4" W-10" H- 9"	Multi-Range Reads D.C. volts and D.C. Mils.	\$270.00
PG-701B	0-600VDC 0-150VDC Bias 6.3 Vac.	0-300 Ma.DC 0-5 Ma.DC 10 amps	105-125 AC 50-60~	.5% from 10-600 VDC	Less than 5 Millivolts at Full Load	D- 13 1/4" W-10" H- 9"	0-600 VDC 0-300 Ma.DC	\$295.00

Performance Guaranteed



Data Subject to Change
Without Notice

Prices F.O.B. Factory

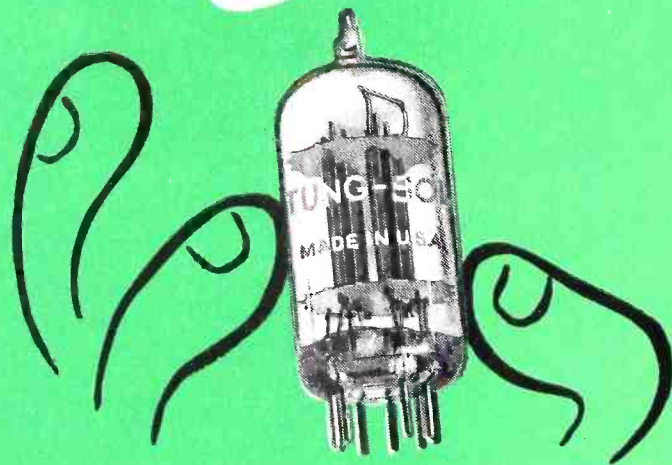
MERCURY

electronic company
Red Bank, New Jersey

Our New Catalog is Coming Off the Press. Write for your copy.



Why Electron Tube Buyers do business with Tung-Sol



Tung-Sol's modern manufacturing techniques and advanced quality control methods assure you of a product that is second to none. Tung-Sol makes tubes—no sets—no equipment—just tubes. We do not compete with our customers. Tung-Sol design, development and application engineers work closely together for the sole purpose of producing a better tube so that you can make a better product. En-

gineering assistance is strictly confidential. Tung-Sol service by competent field sales representatives is nationwide. A Tung-Sol delivery promise is a promise. Closest cooperation is maintained to keep deliveries up to your production schedule requirements.

TUNG-SOL ELECTRIC INC.

Newark 4, N. J.

Sales Offices: Atlanta, Chicago, Culver City (Los Angeles), Dallas, Denver, Detroit, Newark, Seattle

TUNG-SOL® MAKES ALL-GLASS SEALED BEAM LAMPS • MINIATURE-LAMPS • SIGNAL FLASHERS
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Find every size type of resistor you need in the famed Bond . . . and you'll find each and every meets the most performance and quality standards. These precision made resistors meet all standard tolerances, in a wide range of alloys for varying resistance values. All are impregnated to meet MIL-R-93 specifications. Other size bobbins, special mountings and terminals are available.

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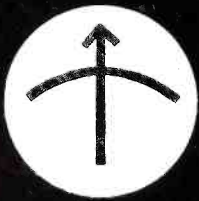
BOND TYPE NO.	EQUIVALENT JAN. TYPE	OVERALL LENGTH INCHES	OVERALL DIAMETER INCHES	RESISTANCE RANGE		POWER RATING		TYPE TERMINAL	WINDING TYPE	NO. OF SECTIONS
				Minimum Ohms/Sec.	Maximum Meg Ohms/Sec.	Commercial	Jan.			
SOLDER LUG TERMINALS (STANDARD)										
Series 100										
102	RB10	7/16	1/2	0.1	0.75	1/3	1/4	SL	NI	1
103	RB11	9/16	1/2	0.1	0.85	1.0	1/3	SL	NI	1
104	RB12	1	1/2	0.1	2.25	1.0	1/2	SL	NI	1
105	RB13	1 1/4	3/4	0.1	5.00	1.0	1/2	SL	NI	1
106	RB14	2 1/8	3/4	0.1	10.00	2.0	1.0	SL	NI	1
108	RB10	15/32	3/4	0.1	1.15	1/3	1/4	SL	NI	1
109	RB11	11/16	3/4	0.1	2.50	1/2	1/3	SL	NI	1
STANDARD LEAD TERMINALS										
Series 200										
201	RB51	3/4	7/16	0.1	1.15	1/2	1/4	AL	NI	1
202		7/16	1/2	0.1	0.75	1/3		RL	NI	1
203		9/16	1/2	0.1	0.85	1/2		RL	NI	1
204		1	1/2	0.1	2.25	1.0		RL	NI	1
205		1 1/4	3/4	0.1	5.00	1.0		RL	NI	1
206		2 1/8	3/4	0.1	10.00	2.0		RL	NI	1
208		15/32	3/4	0.1	1.15	1/3		RL	NI	1
209		11/16	3/4	0.1	2.50	1/2		RL	NI	1
SUBMINIATURE LEAD TYPES										
Series 500										
501		7/32	1/4	1.0	0.100	1/10		RL	IND	1
502		9/32	1/4	1.0	0.125	1/5		RL	IND	1
503		9/32	1/4	1.0	0.120	1/6		RL	NI	1
504		13/32	1/4	1.0	0.225	1/4		RL	NI	1
506		9/16	1/4	1.0	0.325	1/4		RL	NI	1
MINIATURE LEAD TYPES										
514		1/4	3/8	1.0	0.20	1/4		RL	NI	1
515		7/16	3/8	1.0	0.42	1/3		RL	NI	1
516		3/4	3/8	0.1	0.85	3/4		RL	NI	1
517		1	3/8	0.1	1.25	1.0		RL	NI	1
MINIATURE LUG TYPES										
524		1/4	3/8	1.0	0.20	1/4		SL	NI	1
525		7/16	3/8	1.0	0.42	1/3		SL	NI	1
526		3/4	3/8	0.1	0.85	3/4		SL	NI	1
527		1	3/8	0.1	1.25	1.0		SL	NI	1
AXIAL LEAD RESISTORS										
Series 1515	RB51	11/16	3/8	1.0	0.42	1/3	1/4			
1516	RB51	1-1/16	3/8	1.0	0.85	1/2	1/4			
1517		1-5/16	3/8	1.0	1.25	1.0				

SL—Solder Lug AL—Axial Lead
 NI—Non-Inductive RL—Radial Lead
 IND—Inductive

BOND

ELECTRONICS CORPORATION

60 SPRINGFIELD AVENUE, SPRINGFIELD, N. J.



MEASUREMENTS CORPORATION

Laboratory Standards

QUALITY ELECTRONIC
MEASURING INSTRUMENTS
FOR ACCURATE, DEPENDABLE SERVICE

SINCE 1939, MEASUREMENTS CORPORATION has developed and manufactured a precision line of Laboratory Standards designed for radio, television and other fields of the electronic industry. While our production departments are building instruments currently required by laboratories, manufacturers and the Armed Services, MEASUREMENTS' engineering division is engaged in extensive research on new equipment for the art.

Critical engineering control of all phases of manufacturing, from the selection of component parts, through the production departments, to the final mechanical and electrical inspection, assures every customer of quality instruments that are guaranteed to give accurate, dependable service.

**STANDARDS ARE ONLY AS
RELIABLE AS THE REPUTATION
OF THEIR MAKER**

STANDARD SIGNAL GENERATORS

MODEL	FREQUENCY RANGE	OUTPUT RANGE	MODULATION
65-B	75 Kc.-30 Mc.	0.1 microvolt to 2.2 volts	AM. 0 to 100% 400 cycles or 1000 cycles External mod., 50-10,000 cycles
78	15-25 Mc.; 195-225 Mc. 15-25 Mc.; 90-125 Mc. other ranges on order	1 to 100,000 microvolts	AM. 8200-400 cycles 625-400 cycles Fixed at approximately 30%
78-FM	86 Mc.-108 Mc.	1 to 100,000 microvolts	Deviation 0-300 kc, 2 ranges FM. 400-8200 cycles External modulation to 15 Kc.
80	2 Mc.-400 Mc.	0.1 to 100,000 microvolts	AM. 0 to 30% 400 cycles or 1000 cycles External mod., 50-10,000 cycles
82	20 cycles to 200 Kc. 80 Kc. to 50 Mc.	0-50 volts 0.1 microvolt to 1 volt	Continuously variable 0-50% from 20 cycles to 20 Kc.
84	300 Mc.-1000 Mc	0.1 to 100,000 microvolts	AM. 0 to 30%, 400, 1000, or 2500 cycles. Internal pulse modulator. External modulation to 50-30,000 cycles.
84-TV	300 Mc. to 1000 Mc.	Continuously Variable from 0.1 Microvolt to 1.0 Volt	Continuously variable 0 to 30% External modulation 20 to 20,000 cycles.
90	20 Mc.-250 Mc.	0.3 microvolt to 0.1 volt	Continuously variable, 0 to 100% Sinusoidal modulation 30 cycles/5 Mc. Composite TV modulation.

PULSE GENERATOR

MODEL	FREQUENCY RANGE	PULSE WIDTH	OUTPUT
79-B	60 to 100,000 cycles	Continuously variable from 0.5 to 40 microseconds	Approximately 150 volts positive with respect to ground. "Sync Output" 75 volts positive with respect to ground.

SQUARE WAVE GENERATOR

MODEL	FREQUENCY RANGE	WAVE SHAPE	OUTPUT
71	Continuously variable 6 to 100,000 cycles	Rise time less than 0.2 microseconds with negligible overshoot	Step attenuator: 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable.

U.H.F. RADIO NOISE and FIELD STRENGTH METER

MODEL	FREQUENCY RANGE	INPUT VOLTAGE RANGE
58	15 Mc. to 150 Mc.	1 to 100,000 microvolts in antenna. 1 to 100 microvolts on semi-logarithmic output meter, balanced resistance attenuator with ratios of 10, 100 and 1000 ahead of all tubes.

VACUUM TUBE VOLTMETERS

MODEL	VOLTAGE RANGE	FREQUENCY RANGE	INPUT IMPEDANCE
62	0-1, 0-3, 0-30 and 0-100 volts AC or DC	30 cycles to over 150 Mc.	Approximately 7 mmfd.
62-U.H.F.	0-1, 0-3, 0-30 and 0-100 volts AC or DC	100 Kc. to 500 Mc.	Approximately 2 mmfd.
67	.0005 to 300 volts peak-to-peak	5 to 100,000 sine-wave cycles per second	1 megohm shunted by 30 mmfd.

MEGACYCLE METER

MODEL	FREQUENCY RANGE	FREQUENCY ACCURACY	MODULATION
59	2.2 Mc. — 400 Mc.	Within $\pm 2\%$	CW or 120 cycles fixed at approximately 30%. Provision for external modulation

CRYSTAL CALIBRATORS

MODEL	FREQUENCY RANGE	FREQUENCY ACCURACY	HARMONIC RANGE
111	250 Kc. — 1000 Mc.	0.001 %	.25 Mc. Oscillator: .25-450 Mc. 1 Mc. Oscillator: 1-600 Mc. 10 Mc. Oscillator: 10-1000 Mc.
111-B	100 Kc. — 1000 Mc.	0.001%	.1 Mc. Oscillator: .1-450 Mc. 1 Mc. Oscillator: 1-600 Mc. 10 Mc. Oscillator: 10-1000 Mc.

Write for our
Catalog of Laboratory Standards

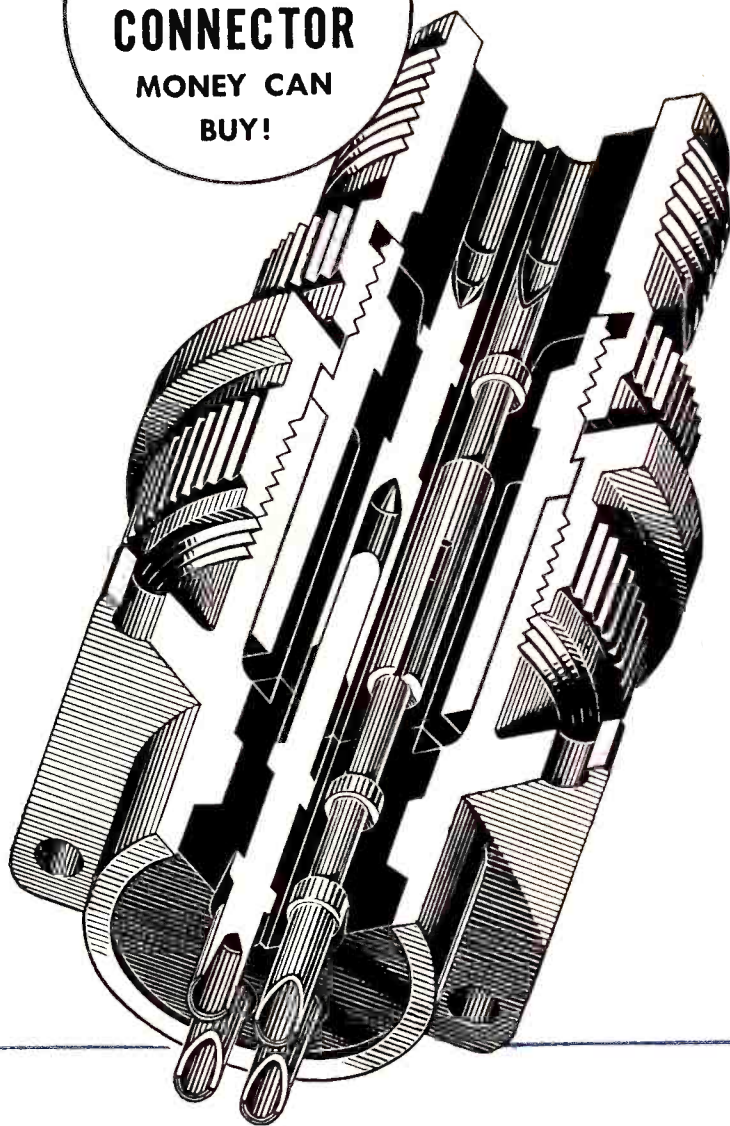
MEASUREMENTS CORPORATION • BOONTON, N. J.

SCINFLEX ASSURES LOW MAINTENANCE BECAUSE IT PERMITS SIMPLICITY

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of -67°F to $+275^{\circ}\text{F}$. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

- Moisture-Proof • Radio Quiet • Single Piece Inserts •
- Vibration-Proof • Light Weight • High Insulation Resistance
- High Resistance to Fuels and Oils • Fungus Resistant •
- Easy Assembly and Disassembly • Fewer Parts than
- any other Connector • No additional solder required.

The Finest
**ELECTRICAL
CONNECTOR**
MONEY CAN
BUY!



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SCINTILLA MAGNETO DIVISION of
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Eclipse-Pioneer



**CORROSION-RESISTANT
AUTOSYN* SYNCHROS**

(AY-200 Series)

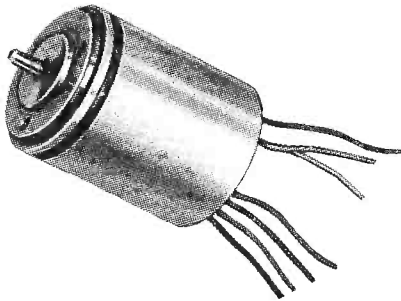
AVAILABLE FOR ALL APPLICATIONS

TYPICAL ELECTRICAL CHARACTERISTICS

	Type Number	Input Voltage Nominal Excitation	Input Current Milliampères	Input Power Watts	Input Impedance Ohms	Stator Output Voltages Line to Line	Rotor Resistance (DC) Ohms	Stator Resistance (DC) Ohms	Maximum Error Spread Minutes
Transmitters	AY201S-26	26V, 400~, 1 ph.	125	0.6	40+j230	11.8	12	5.8	15
Control Transformers	AY201S-25	From Trans. Autosyn	Dependent Upon Circuit Design				40	10.2	20
Differentials	AY231S-25	From Trans. Autosyn	Dependent Upon Circuit Design				14	10.2	30
Resolvers	AY221S-25	26V, 400~, 1 ph.	70	0.4	108+j440	11.8	50	11.4	24

*Registered trademark Bendix Aviation Corporation.

Eclipse-Pioneer



**PYGMY
AUTOSYN SYNCHROS**

(AY-500 Series*)

**DESIGNED FOR USE WHERE SPACE
AND WEIGHT ARE CRITICAL**

TYPICAL ELECTRICAL CHARACTERISTICS

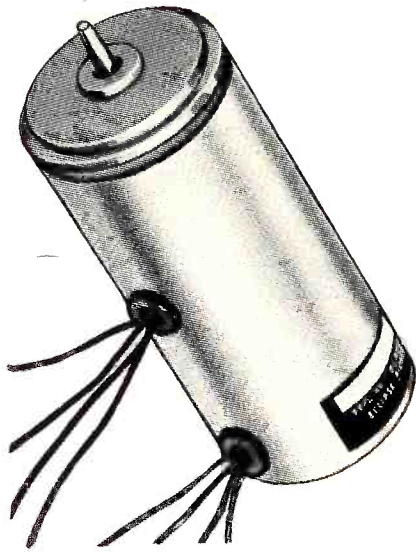
	Type Number	Input Voltage Nominal Excitation	Input Current Milliampères	Input Power Watts	Input Impedance Ohms	Stator Output Voltages Line to Line	Rotor Resistance (DC) Ohms	Stator Resistance (DC) Ohms	Maximum Error Spread Minutes
Transmitters	AY503-4	26V, 400~, 1 ph.	220	2.5	45+j100	11.8	23.0	11.0	24
Receivers	AY503-2	26V, 400~, 1 ph.	220	2.5	45+j100	11.8	23.0	11.0	75
Control Transformers	AY503-3	From Trans. Autosyn	Dependent Upon Circuit Design				170.0	45.0	24
	AY503-5	From Trans. Autosyn	Dependent Upon Circuit Design				550.0	188.0	30
Differentials	AY533-3	From Trans. Autosyn	Dependent Upon Circuit Design				93.0	45.0	30
Resolvers	AY523-3	26V, 400~, 1 ph.	55	0.6	290+j490	11.8	210.0	42.0	30
	AY543-5	26V, 400~, 1 ph.	11	0.12	900+j2200	11.8	560.0	165.0	30

*Corrosion-resistant models are available in sample quantities.

Eclipse-Pioneer

Teterboro, New Jersey

Eclipse-Pioneer



CORROSION-RESISTANT PYGMY MOTOR GENERATORS

Typical Electrical Characteristics

GENERATOR DATA

Linearity— $\frac{1}{2}$ of 1% to 4000 rpm
Output—300 mv/1000 rpm with 18 volt,
400 cycle excitation
Null—Less than 10 mv

MOTOR DATA

18 or 26 volt, 400 cycle,
2-phase low inertia motor

Eclipse-Pioneer



GYROS

FOR ALL PRECISION
APPLICATIONS

- VERTICAL GYROS
- FREE GYROS
- RATE GYROS
- SPECIAL PURPOSE GYROS

As the world's largest producer of precision gyros, we have the experience to help you solve your gyro problems. We would appreciate an opportunity to work with you.

DIVISION OF

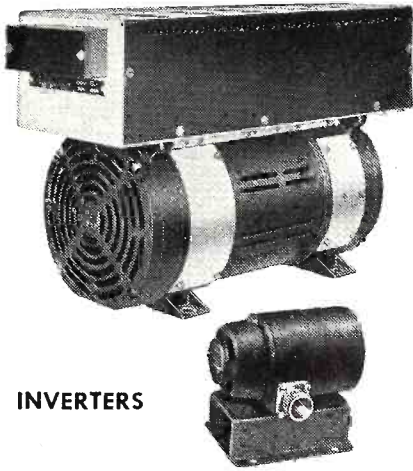
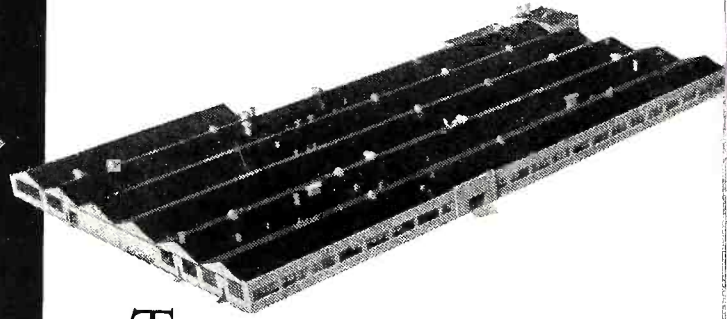


EXPORT SALES: Bendix International Division
72 Fifth Avenue, New York 11, N. Y.

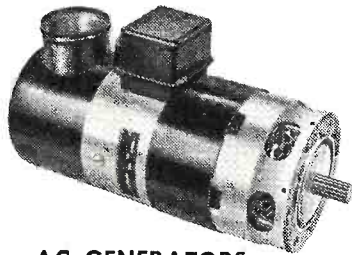
Bendix Aviation Corporation

concentrates development, sales and production of special-purpose electron tubes, inverters and AC generators with its dynamotors and small motors at its

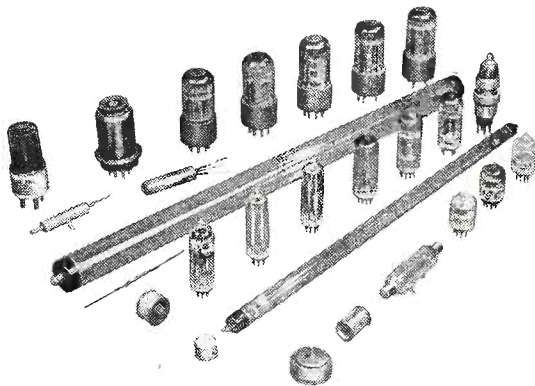
Red Bank Division



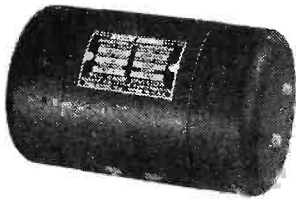
INVERTERS



AC GENERATORS



SPECIAL-PURPOSE ELECTRON TUBES



DYNAMOTORS

To provide its customers with an unequalled source for special-purpose electron tubes, inverters and AC generators, Bendix Aviation Corporation has placed its entire development, sales and manufacture of these products with its Red Bank Division at Eatontown, N. J. Here in a modern new plant of over 118,000 square feet have been concentrated the most highly skilled personnel and the latest available machinery to produce the highest quality electron tubes, inverters and AC generators possible. At the same time, a full-scale program is being carried on continuously at Red Bank to develop these products for even greater efficiency and versatility. In addition to its new products . . . taken over from the Eclipse-Pioneer Division, Teterboro, N. J. . . . the Bendix Red Bank Division will continue producing its established line of dynamotors and small DC motors. If you require precision items of these types, it will pay you to take advantage of the unique experience and facilities offered to you by Bendix Red Bank.

Division of



Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.



Here's your complete guide to-

E-I MULTIPLE HEADERS AND SEALED LEADS



with a complete discussion of hermetically sealed

TERMINALS and MULTIPLE HEADERS

including: ENGINEERING DRAWINGS AND RECOMMENDED APPLICATIONS

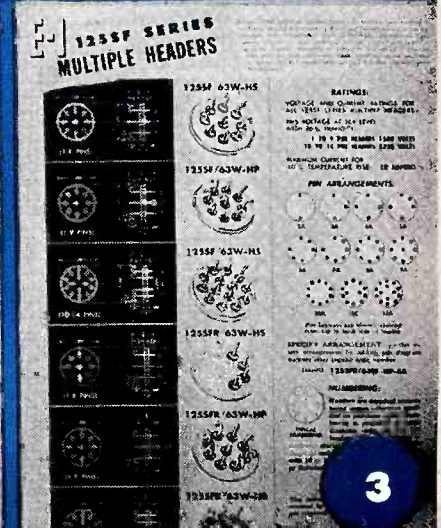
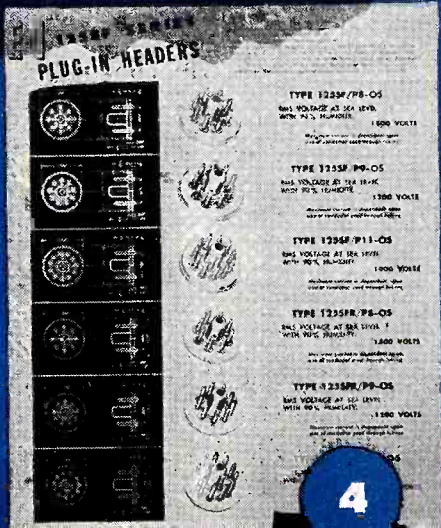
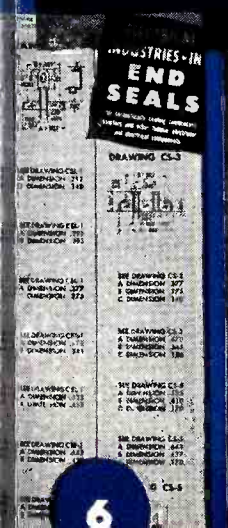
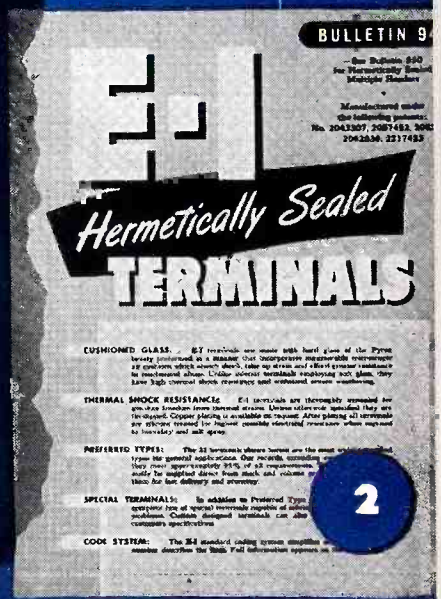
E-I STANDARD TYPES — Offering a quick solution to problems relating to sealed terminals. Complete information on standard sealed leads, standard multiple headers, octal plug-in headers and end seals is contained in these helpful catalogs.

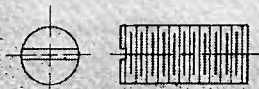
1. HERMETICALLY-SEALED STANDARD MULTIPLE HEADERS
2. HERMETICALLY-SEALED STANDARD TERMINALS
3. SPECIAL MULTIPLE HEADERS
4. SPECIAL PLUG-IN HEADERS
5. COLOR-CODED TERMINALS
6. END SEALS

E-I SPECIAL TYPES — Where applications indicate special designs, custom seals to specifications can be supplied at economical prices based on mass production methods. Recommendations will be made without obligation on receipt of your drawings or rough sketches. Please mention approximate quantities needed.

ENGINEERS AND DESIGNERS! Request your E-I handy file folder, now.

ELECTRICAL INDUSTRIES • INC
44 SUMMER AVENUE, NEWARK 4, NEW JERSEY
MANUFACTURERS OF SPECIALIZED ELECTRONIC EQUIPMENT





THREADED I. F. CORE



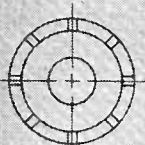
SLEEVE CORE



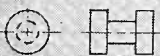
"E" CORE



TOROID



CUP CORE



DUMBBELL CORE



IRON CORE COIL FORM



PLAIN CORE



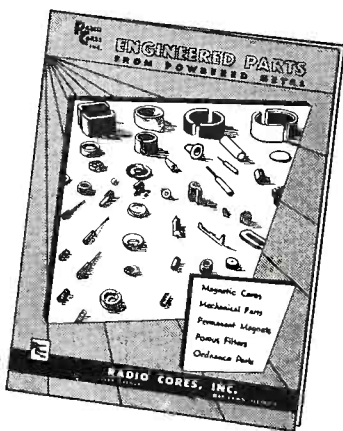
INSERT CORE



TUNING CORE

Radio Core Quality Control

All Radio Cores manufactured are produced with special attention to both mechanical and electrical tolerances, resulting in lower incoming inspection and assembly costs on the part of the customer.



Detailed Radio Core information, samples, designs and specific costs may be obtained by writing Department No. EBG-53

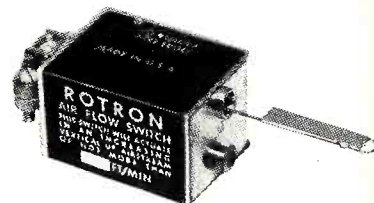
Write for "Engineered Radio Cores" Technical Data Booklet No. EBG-53

Radio Cores, Inc.

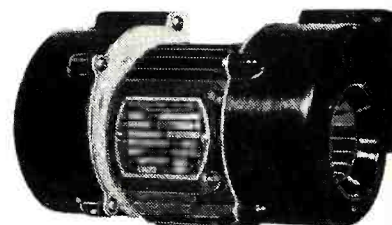
9540-50 Tully Avenue Oak Lawn, Illinois



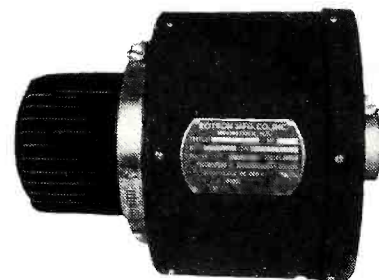
A COMPLETE LINE OF EXPERTLY DESIGNED ELECTRONIC COOLING COMPONENTS



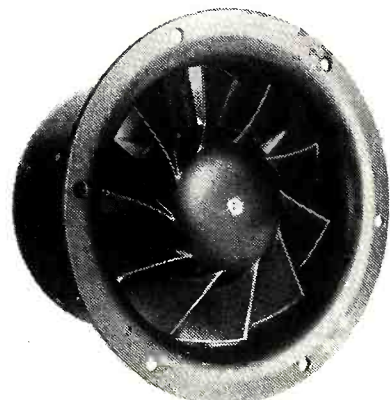
AIRFLOW INTERLOCK SWITCHES



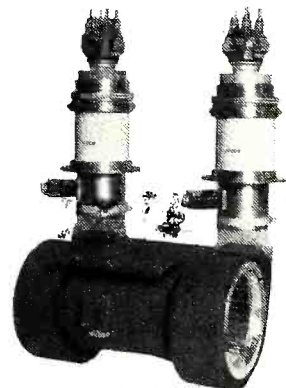
MINIATURE BLOWERS AND FANS FOR AIRBORNE EQUIPMENT



HI-PRESSURE DIRECT DRIVEN TURBINES - INDUCTION MOTORS



VANE-AXIAL ALTITUDE FANS WITH CONSTANT-WEIGHT PERFORMANCE



HI-VELOCITY BLOWERS MATCHED TO STANDARD TRANSMITTING TUBES

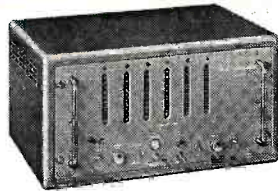
Write for complete catalogue including valuable data sheets

ROTRON MFG. CO.

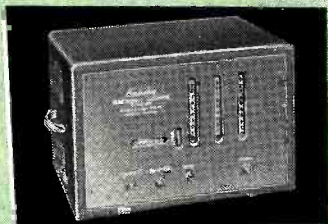
Schoonmaker Lane
WOODSTOCK, N. Y.

**BERKELEY electronic instrumentation
for laboratory or production line**

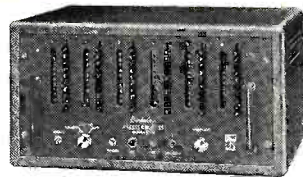
industrial



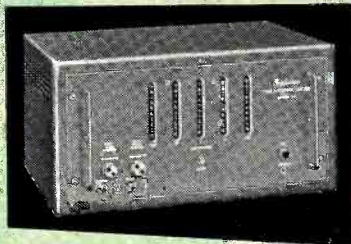
Events-Per-Unit-Time Meter



Industrial counter
Plug-in decimal counting unit



Preset counter



Time Interval Meter

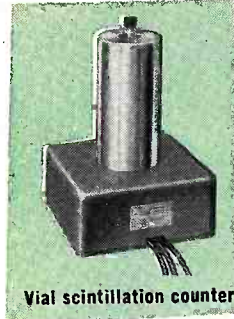
instruments

- Decimal counting units
- High speed counters
- Preset counters
- Time interval meters
- Events-per-unit
Time meters
- Frequency meters
- Universal counter
& timers
- Double pulse
generators
- Digital recorder
systems with
printed readout

applications

- Counting
- Counting plus
control
- Time interval
measurement
- Tachometry
- Pressure
measurement
- Flow measurement
- Frequency
determination
- Viscosity
measurement
- Velocity
measurement

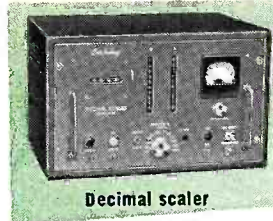
nuclear



Vial scintillation counter



Scintillation counter



Decimal scaler

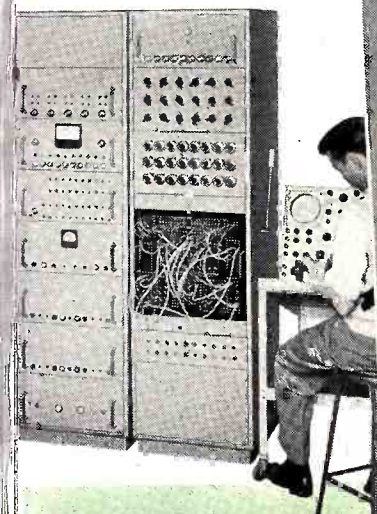
instruments

- Automatic scalars
- Decimal scalars
- Portable (battery operated)
scalars
- Counting rate meters
- Counting rate computers
- Counting systems
- Monitors
- Scintillation counters

applications

- Clinical measurement
- Gauging applications
- Health-physics monitoring
- Industrial process control
- Isotopic tracer measurement
- Medical research
- Radioactivity surveys

computers



**DO IT WITH
EASE***

***Electronic Analog
Simulating Equipment**

Solves high-order equations in 1 to 2 hours - Solution time for equations up to the 20th order, including set-up, is only one to two hours!

Simple to operate and maintain - any engineer who can set up the equation can solve it with EASE; no "computer experts" required for maintenance.

Compact, low-cost - requires less than 8 sq. ft. of floor space. 20-channel unit costs less than \$6,850 (f.o.b. factory) complete!

For complete data, please indicate instrumentation in which you are interested, and request Bulletin 106A

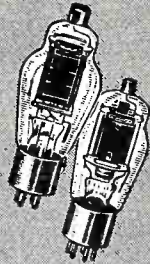
Berkeley / d i v i s i o n

BECKMAN INSTRUMENTS INC.
2200 WRIGHT AVE., RICHMOND, CALIF.

M-12

TUBES

RCA
DUMONT
EIMAC
HYTRON
KEN-RAD
TAYLOR
SYLVANIA
CETRON
NATIONAL UNION
GENERAL ELECTRIC
and others



METERS

and INSTRUMENTS

HICKOK
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SIMPSON
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WESTON
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INCLUDING

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ALPHA
AMPHENOL
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BIRNBACH
CORNISH
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TRANSFORMER

and POWER SUPPLIES

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MALLORY
SOLA ELECTRIC
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AMERICA'S GREATEST SOURCE

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NATIONAL
SANGAMO
SPRAGUE
ASTRON
CARDWELL
HAMMARLUND



SWITCHES

PLUGS and JACKS

ARROW, HART
& HEGEMAN

BIRNBACH

CENTRALAB

CARLING

MALLORY

MICRO-SWITCH

UNIMAX

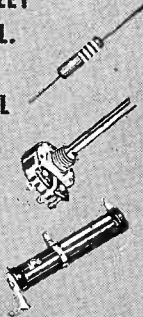
AHRCO

I. C. A.

RESISTORS

and POTENTIOMETERS

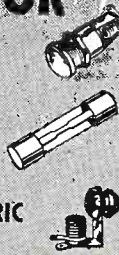
ALLEN-BRADLEY
CHICAGO TEL.
CLAROSTAT
CONTINENTAL
CENTRALAB
ERIE
I. R. C.
MALLORY
OHMITE
SHALLCROSS
and others



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and FUSES

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JAN
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Plate Circuit, etc.



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ALL LEADING STANDARD
NATIONALLY-ADVERTISED
BRANDS!

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THE UNIQUE THERMOPLASTIC

with many outstanding properties for

Electronic and Electrical Applications

CHECK THESE MANY ADVANTAGES:

- ✓ High Dielectric Properties
- ✓ Zero Water Absorption
- ✓ Non-wetting
- ✓ Chemically Inert to Acids, Alkalis, Solvents
- ✓ High Impact Strength
- ✓ Excellent Compressive Strength . . . 32,000 to 80,000 psi.
- ✓ Use in Rigid, Flexible or Liquid Forms . . . to suit application
- ✓ Optical Properties Variable
- ✓ Color Range Unlimited
- ✓ Can be filled with fibre glass, graphite, powdered metals, etc.
- ✓ Wide Temperature Utility—from minus 320°F to plus 390°F
- ✓ Low Thermal Conductivity
- ✓ Unaffected by Thermal Cycling
- ✓ Non-carbonizing
- ✓ Non-Flammable
- ✓ Inert to Metal Inserts
- ✓ Dimensionally stable . . . unaffected by temperature, moisture, age
- ✓ Non-porous
- ✓ Can be readily molded; extruded; dip or spray applied—using conventional methods and equipment
- ✓ Can be machined to close tolerances

KEL-F

® Reg. U.S. Pat. Off.

This unique material, since its commercial introduction just a few years ago, has gained wide acceptance through meeting critical "specs" where other materials failed.

Now—available in vastly increased volume from new mass-production facilities and at a cost which is but a fraction of its introductory price—designers should find use of Kel-F convenient and economically sound as well as technically superior for most critical and semi-critical applications.

[SEE THREE FOLLOWING PAGES FOR MORE SPECIFIC INFORMATION.]

KEL-F

TRIFLUORO
CHLORO
ETHYLENE
POLYMERS

KEL-F

MOLDING
POWDERS

KEL-F

FLUORO
CHLORO
CARBON
PLASTIC

KEL-F

DISPERSION
COATINGS

KEL-F

TRIFLUORO
CHLORO
ETHYLENE
POLYMERS

KEL-F

OILS
WAXES
GREASES

KEL-F

ELECTRICAL PROPERTIES

Properties	ASTM Test Method	Unit of Measure	Results
Volume resistivity (50% relative humidity and 25°C.)	D257-46	ohm-cm	1.2x10 ¹⁸
Dielectric strength	.....	short-time 1/8"	2500
	D149-44	v/mil	
	D149-44	Step by step 1/8"	390
	.....	v/mil	
	D149-44	Step by step 0.030"	1200
	.....	v/mil	
	.....	Step by step 0.005"	5000
	.....	v/mil	
Arc resistance	D495-42	sec.	>360

TRIFLUORO
CHLORO
ETHYLENE
POLYMERS

KEL-F



FOR MORE COMPLETE DATA ON ELECTRICAL PROPERTIES OF KEL-F

write for Technical Bulletin #1-3-53, which includes informative graphs indicating Dielectric Constant and Dissipation Factor as functions of frequency and temperature.

MOLDING
POWDERS

GENERAL PROPERTIES — UNPLASTICIZED Kel-F

(Similar data on Plasticized Kel-F now in preparation)

Properties	ASTM Test Method	Unit of Measure	Results
Molding qualities	.....	.....	Excellent
Transition temperature	.....	°F.	410-414
Compression molding temperature	.....	°F.	445-500
Compression molding pressure	.....	psi	500-15,000
Injection molding temperature	.....	°F.	440-580
Injection molding pressure	.....	psi	5,000-40,000
Compression ratio	.....	.....	2.0
Mold shrinkage	.....	in. per in.	0.005-0.010
Specific gravity	D792-48T	.....	2.1
Apparent bulk factor	.....	cu. in./lb.	28.8-91.0
Refractive index	D542-42	n _D ²⁵	1.43
Tensile strength, 77°F.	D638-46T	psi	4,600-5,700
248°F.	D638-46T	psi	460-570
Tensile strength (oriented film and fibre)	.....	psi	30,000-50,000
Yield strength, 0.2% offset, 77°F.	D638-46T	psi	3640
Elongation	D638-46T	%	28-36
Modulus of elasticity, 77°F.	.....	.....	.....
Tensile	D638-46T	psi	192-226x10 ³
Flexural	D790-45T	psi	182x10 ³
Compressive	D695-44T	psi	177-191x10 ³
Compressive strength, 77°F.	D695-44T	psi	32,000-80,000
Flexural strength, 77°F.	D790-45T	psi	8200
158°F.	D790-45T	psi	1500
Stiffness, #300 NST Grade	.....	.....	.....
minus 297°F.	D747-48T	psi	810x10 ³
minus 148°F.	D747-48T	psi	500x10 ³
32°F.	D747-48T	psi	250x10 ³
212°F	D747-48T	psi	22,000
392°F.	D747-48T	psi	4,500
Impact strength, Izod, notched, 77°F.	D256-47T	ft. lb./in. of notch	3.62
Outdoor aging, one year	.....	.....	No detectable change
Rockwell hardness	D785-48T	R scale	111-115
Durometer hardness	D676-47T	D scale	80
Abrasion resistance	.....	.....	.....
59.9946 gm. heat treated	Fed. Spec. L-P-406-a	loss in gm/1000 cycles	0.0048
57.3753 gm. quenched	method 1091	.....	.....
.....	Fed. Spec. L-P-406-a	loss in gm/1000 cycles	0.0175
.....	method 1091	.....	.....
Thermal conductivity	.....	cal/cm ² /sec/°C/cm	1.44x10 ⁻⁴
Thermal conductivity	.....	btu/ft ² /hr/°F/in	0.418
Specific heat	.....	cal/gm/°C	0.216
Thermal coefficient of linear expansion	.....	.....	.....
-80° to 20°C.	D696-44	in/in/°C.	4.5x10 ⁻⁵
20° to 150°C.	D696-44	in/in/°C.	7x10 ⁻⁵
Resistance to heat (continuous)	.....	°F.	390
Water absorption	D570-42	%	0.00
Burning rate	.....	.....	Nil
Effect of sunlight	.....	.....	None
Effect of strong and weak acids	.....	.....	None
Effect of strong and weak alkalis	.....	.....	None
Effect of organic solvents	.....	.....	None
.....	.....	.....	Generally unaffected.
.....	.....	.....	generated compounds cap
.....	.....	.....	slight swelling.
.....	.....	.....	Inert
Effect on metal inserts	.....	.....	.....
Machining qualities	.....	.....	Excellent
Clarity	.....	.....	Transparent to translucent
Color possibilities	.....	.....	Unlimited

KEL-F

FLUORO
CHLORO
CARBON
PLASTIC

KEL-F

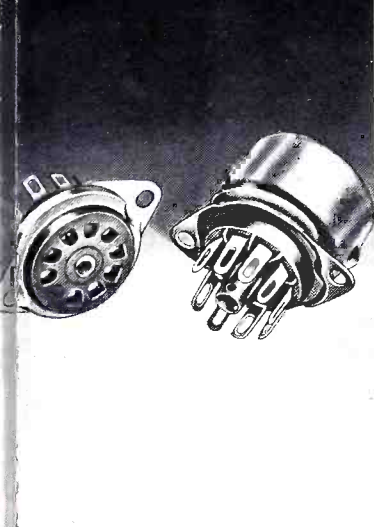
DISPERSION
COATINGS

KEL-F

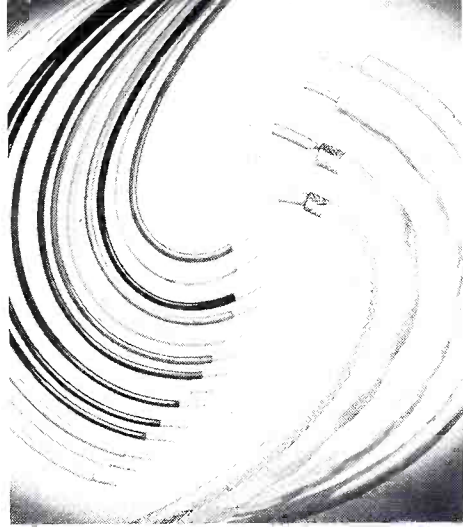
TRIFLUORO
CHLORO
ETHYLENE
POLYMERS

KEL-F

OILS
WAXES
GREASES



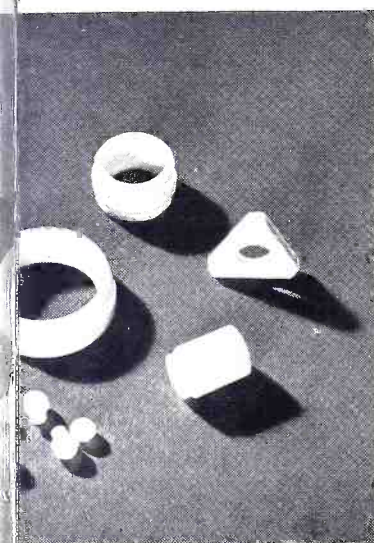
are tube sockets, precision
offer high insulation perform-
under 100% humidity and thermal
conditions... without corona
biting... cut interference from
high temperatures.



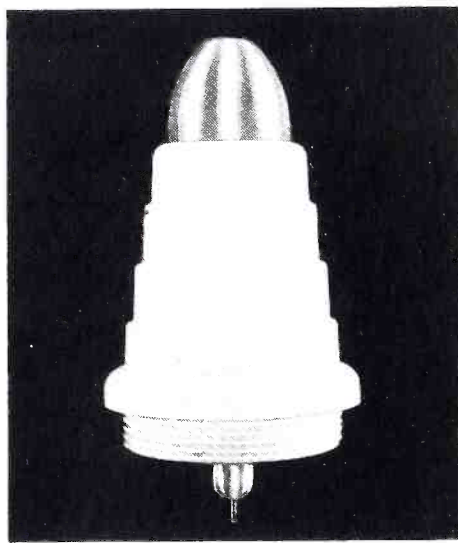
Wire insulated with extruded KEL-F
serves in sub-zero to 300°F hookup
applications—continuously... with-
stands up to 410°F without melting...
performs at all frequencies... and in
contact with corrosives and solvents.



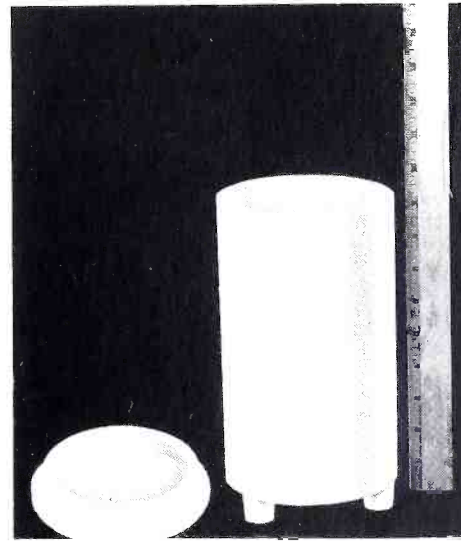
Extruded "spaghetti" for aircraft and
other wiring maintains insulation quali-
ties under high temperatures and hu-
midity... stays flexible at sub-zero...
resists cracking at high temperatures...
unaffected by corrosive oils, fuels.



ent parts, such as fuel gage
instruments, readily machined to
0.001", give positive electrical
isolation... maintain critical accu-
racy... immersed in corrosive liquids
prevent moisture "shorting".



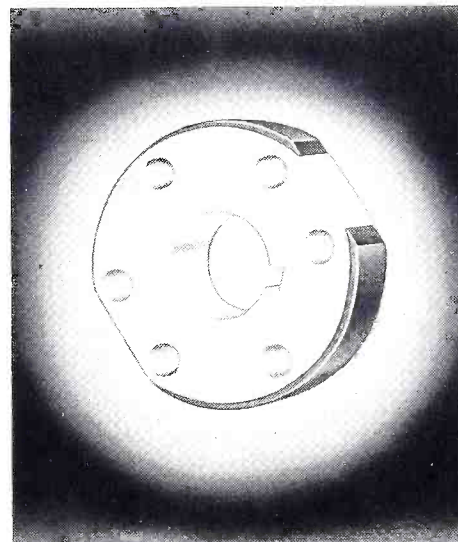
High-frequency insulators for 10,000 v,
8 amp. pulses cut leakage and tracking
at high humidity... maintain hermetic
seal at high altitudes, under thermal
cycling and mechanical abuse.



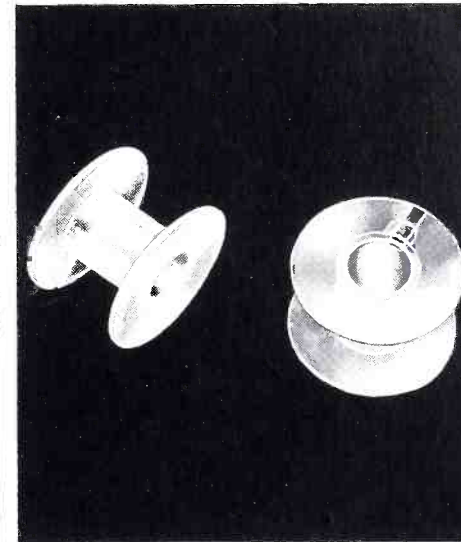
Electronic "Pots" maintain hermetic
seal, dielectric strength through sus-
tained shock, thermal cycling. Inert
to "potting" oils, salt spray... resist
distortion or damage in range of from
minus 180°F to plus 390°F.



Electrical tape (2 mil and up)
resists moisture... high dielectric
strength allows lighter
weight... elasticity permits com-
plete coverage.



One-piece switch rotor carries 75 amp.
surges without shorting in high humid-
ity... resists oils and greases... holds
contacts in alignment at all tempera-
tures and under rough handling.



Coil forms retain dimensions and high
electrical insulation in miniaturized
components exposed to high humidity,
extreme temperatures... superior
strength cuts shock, vibration damage.

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CHLORO
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POLYMERS**KEL-F**MOLDING
POWDERS**KEL-F**FLUORO
CHLORO
CARBON
PLASTIC**KEL-F**DISPERSION
COATINGS**KEL-F**TRIFLUORO
CHLORO
ETHYLENE
POLYMERS**KEL-F**OILS
WAXES
GREASES

Molding, Extruding and Coating Services for Kel-F®... readily available throughout the country...

Kel-F trifluorochloroethylene polymer plastics are extruded, compression, injection and transfer molded on conventional equipment designed to operate from 450°F to 650°F using standard production methods.

Molded and extruded Kel-F polymer plastic forms are dimensionally stable, unaffected by moisture, and are readily machined, punched, drilled, stamped, polished or ground to precision tolerances.

Ask for List of Experienced Molders, Extruders, Fabricators and Coaters

Fluid dispersions of high polymer Kel-F are applied by dip-coating and conventional spraying followed by heat curing.

A special Feature of Kel-F plastic is its amenability to heat treatment which yields a material with controlled rigidity, plasticity or hardness. No special preparation or modification is required, and the inherent chemical, dielectric and physical properties of the plastic are not altered.

Kel-F is available in these "Stock" forms

(Ask for list of sources of supply)

- **Molded Sheets**
Thickness — 1/64" to 1/2"
Diameter — in disc form to 60"
- **Molded Rod**
Diameter — up to 4"
Length — to 12"—24"
- **Extruded Strip**
Thickness — .010" to .0125"
Width — 2" to 4"
Length — to specification
- **Extruded Wire Coatings**
To Specification
- **Extruded Rod**
Diameter — up to 1"
Length — to specification
- **Extruded Tubing and "Spaghetti"**
Diameter — up to 2"
Wall thickness—to specification
Length — to specification
- **Thin Film**
(EXTRUDED AS LAY-FLAT TUBING)
Thickness — .002" to .010"
Width — lay-flat up to 20"
(Total width to 40")

Kel-F is also available in standardized electrical and electronic components; chemical fittings and seals; bags and containers; porous filter media; and many other forms for varied industrial use.

ORDER these basic forms of Kel-F from —

CHEMICAL MANUFACTURING DIVISION, The M. W. Kellogg Company

MOLDING POWDERS (In High or Low Density Powder)

Unplasticized

- #300 For high temperature service
- #270 For less severe temperatures

Plasticized

- #300—P25 With 25% Plasticizer
(Other plasticized compositions to order)

DISPERSIONS

- N-1 Routine spray, dip coating
- NW-25 Flows more readily at fusion temperatures

OILS, WAXES and GREASES

- #1 Light Oil
- #3 Medium Oil
- #10 Heavy Oil
- #40 Waxy Oil (pour point 80-90°F)
- #150 Hard Wax at 70°F
(Greases compounded to order)

Full-Scale Applications Laboratory... now in operation at Jersey City plant...

In connection with the building of the new Kel-F plant facilities for development and applications work have been considerably expanded. A most complete assortment of scientific apparatus and production molding equipment is now teamed with an increased staff of experienced scientists and technicians... to concentrate on the development of improved methods of fabrication as well as new uses for the unique Kel-F polymers.

Here, problems encountered by molders, fabricators or end-product users can be investigated under controlled conditions... to obtain fuller utilization of Kel-F's unique properties... improved, more economical, production methods for plastics fabricators... better design for products.

Technical Information Available:

- Bulletin #1-3-53 Physical, Electrical, Chemical and Mechanical Properties
- Bulletin #5-1-52 Properties of Oils (Plasticizers), Greases and Waxes
- Bulletin #4-10-50 Dispersion
- Bulletin #3-10-50 Molding Techniques
- Bulletin #2-10-50 Modification of Properties By Heat Treatment

ALSO: Detailed Application Reports of products and processes—in the electrical, chemical, and equipment fields—employing Kel-F in its various forms.

For further information write

Technical Service CHEMICAL MANUFACTURING DIVISION THE M. W. KELLOGG COMPANY

P. O. Box 469, Jersey City 3, N. J.
or offices in New York, Chicago
Los Angeles,



SUBSIDIARY OF
PULLMAN
INCORPORATED

Cramer

TIMING DEVICES

SPECIALISTS IN TIME CONTROL

IE INTERVAL TIMER



Turning knob to desired time setting starts time cycle. Progress indicated by pointer traveling towards zero. Built-in push button, to initiate timing cycle, available as optional feature.

IG INTERVAL TIMER TYPE IG



Similar to IE above, but without front plate and housing. Designed for built-in applications, where timer is mounted behind panel and shaft protrudes through to dial and pointer.

RESET TIMER TYPE RE



Pressing built-in start button switches circuits and starts timer. Progress indicated by independent pointer traveling towards zero. At end of cycle circuits switch back and timer resets, ready for a new cycle.

TEC TIME DELAY RELAYS TYPES TE - TEC



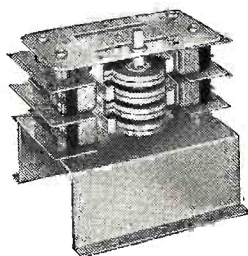
Highest accuracy for precision timing. Timing cycle initiated by external means. Micrometer knob on range pointer for extremely precise setting. Progress pointer indicates time remaining.

TF TIME DELAY RELAY TYPE TF



For built-in applications. Provides fixed time delay between closing of external contact and switching of load circuits. Enclosed snap-type switch mechanism.

CF CYCLE TIMER TYPE CF



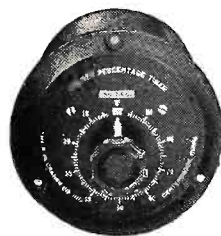
Permits automatic control of 1 to 8 circuits. Single or multiple cam units permit adjustment to any desired time sequence. May be arranged to stop at the end of one complete cycle or repeat cycle continuously.

V PULSE TIMER TYPE V



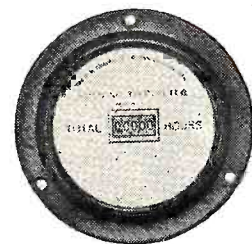
Repeats electrical impulse of predetermined duration at the end of any desired time interval which may be set upon the dial. Ideal for such applications as automatic lubricators, conveyors, sludge pumps, bar screens, feed water controls, etc.

PE PERCENTAGE TIMER TYPE PE



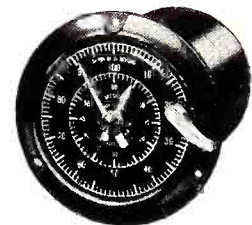
Adjustable automatic timer to control percentage of time in which an electrical circuit is closed or open out of a definite time cycle. Ideal to control operating time of an oil burner, furnace, etc.

E RUNNING TIME METER TYPE E



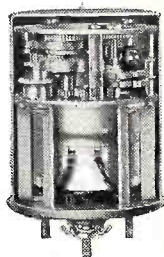
An elapsed time indicator to register total operating or idle time of any machine or system. Excellent for indicating usage time of vacuum tubes or machine tool cutter, etc., in conjunction with a preventive maintenance program.

ET TIME TOTALIZER TYPE ET



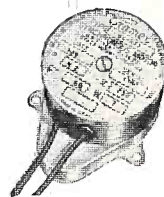
A highly accurate stop clock to measure and to indicate elapsed time intervals. Used wherever precise measurement of time is required. Accuracy of better than .02 of 1%.

HTI HERMETICALLY SEALED TIME DELAY RELAY TYPE HTI



Retains high accuracy of standard Cramer timers, but is miniaturized for airborne or mobile applications. Hermetically sealed in steel case and tested to meet most rigid military applications.

SX SYNCHRONOUS TIMING MOTOR



Small synchronous motor for any application requiring constant speed. Exceptionally high torque for its size (30 in. ozs. at 1 RPM stall torque). Instantaneous start and stop. Wide range of speeds from 60 RPM to 1 RPD.

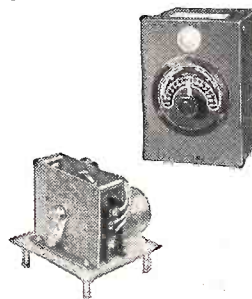
TYPE SX

SX CLUTCH UNIT MOTOR



SX motor with differential gear-type clutch. Used where reset is needed or where extremely accurate clutching is required.

ENCLOSURES SPECIAL TIMERS AND ENCLOSURES



In addition to the standard panel mounting timers illustrated above, Cramer manufactures a complete line of special purpose timers, timers in special enclosures, hermetically sealed devices, etc.

Write for complete information about your timing requirements or for advice on special problems.

the R. W. CRAMER CO., INC.

Box 27, Centerbrook, Conn.



BALLANTINE

World's Leading Electronic Voltmeters

SENSITIVE AC VOLTMETERS

ACCESSORIES

AUDIO to 150 kc MODEL 300

Voltage Range 1mv—100v
 Frequency Range 10cps—150kc
 Accuracy 2% ENTIRE RANGE
 Input Impedance 1/2 meg shunted by 30μf



SENSITIVE INVERTER MODEL 700

For Measuring DC Voltages when combined with any AC Voltmeter

Voltage Range 1μv—100v DC
 Ratios DC Input to RMS Output 1:100 & 10:1
 Accuracy 1% 100μv—100v
 Input Resistance >10 meg for 1:100
 50 meg for 10:1



SUB-AUDIO to 150 kc MODEL 302B

Voltage Range 100μv—100v
 Frequency Range 2cps—150kc
 Accuracy 3% 5cps—100kc
 5% elsewhere
 Input Impedance 2 meg shunted by 15 μf*



DECADE AMPLIFIER MODEL 220A

For Increasing the Sensitivity of any AC Voltmeter by 10 or 100 times

Voltage Range 10μv—50mv
 Frequency Range 10cps—150kc
 Accuracy 2% ENTIRE RANGE
 Input Impedance 5 meg shunted by 15μf



AUDIO to 2 mc MODEL 310A

Voltage Range 100μv—100v
 As null detector 20μv min
 Frequency Range 10cps—2mc
 As null detector 5cps—4mc
 Accuracy 3% 10cps—1mc
 5% elsewhere
 Input Impedance 2 meg shunted by 15μf*



MULTIPLIERS MODEL SERIES 1300

For Extending the Voltage Ranges of Ballantine Voltmeters to 1000 and to 10,000 Volts

Voltmeter Model	For Extending Range to	
	1000v	10,000v
300	1300A	1300B
305	—	1305B
302B 310A	1310A	1310B
314	—	1314B



AUDIO to 6 mc MODEL 314

Voltage Range 1mv—1000v
 (100μv—1mv without probe)
 Frequency Range 15cps—6mc
 Accuracy 3% 15cps—3mc
 5% elsewhere
 Input Impedance 11 meg shunted by 6μf
 (1 meg shunted by 25μf without probe)



SHUNTS MODEL SERIES 600

For Measuring Current AC or DC when used with any AC or DC Voltmeter

Model	Resistance	Max Current
601	1 Ω	1000ma
602	10 Ω	300ma
603	100 Ω	100ma
604	1000 Ω	30ma

Current from 0.1μa to 1a can be measured using these shunts with Ballantine Voltmeters and Accessories.



PEAK-to-PEAK MODEL 305

Voltage Range 1mv—1000v pk-to-pk
 Frequency Range 10cps—100kc (sine wave)
 Pulse width 3μsec—250μsec
 Min Rep Rate 20 pulses per sec
 Accuracy 5% for pulses
 Input Impedance 2 meg shunted by 15 μf*



SPECIAL PURPOSE MODELS

To Suit Your Requirements.

Write to us about your special measurement problems.

Famous for SENSITIVITY • ACCURACY • STABILITY

Each Ballantine Voltmeter

- Has only ONE voltage scale with decade range switching.
- Provides the same accuracy of reading at ALL points on the logarithmic voltage scale.
- Has a linear decibel scale.

- May be used as a high gain wide band amplifier.
- Responds to the average value of the input voltage waveform thus avoiding "turn-over" discrepancy.

WRITE FOR MORE DETAILED INFORMATION

*Shunt capacitance is 8μf on all ranges except two most sensitive ranges.

BALLANTINE LABORATORIES, INC.

100 FANNY ROAD BOONTON, N. J.

General Ceramics'
high frequency

FERRAMIC CORES
*TRADEMARK

SOFT MAGNETIC

Specified with Confidence for—

- HIGH PERMEABILITY
- LOW LOSS FACTOR
- HIGH EFFICIENCY
- LIGHT WEIGHT

The Most Complete Line of Ferrites
 —for Commercial and Military Electronics

- CUP CORES
- EI CORES
- TUNING CORES
- TUNING SLUGS
- TOROIDS
- SPLIT RINGS
- "C" CORES
- "U" CORES
- TV COMPONENTS
- ANTENNA RODS

— IF YOU NEED ENGINEERING ASSISTANCE ON SPECIFIC PROBLEMS

The General Ceramics technical staff will be happy to consult with you. Just call or write Sales Engineer, Ferramics Division.

Ferramics offer many outstanding advantages. These widely adopted magnetic core materials have reduced assembly time by eliminating laminations in inductive components, cut costs and reduced space requirements by replacing tubes in digital computers, and revolutionized microwave transmission design by use of gyrator effect. Ferramics have improved designs in numerous other equipments, and have resulted in the development of basically new techniques in still others. Current research indicates still greater gains to come. The complete story on Ferramics is available without obligation.

TABLE OF MAGNETIC PROPERTIES OF FERRAMICS

PROPERTIES	UNIT	A-106	B-90	C-159	D-216	E-212	G-254	H-419	M-1102	I-141	J-472
Initial Perm. at 1 mc/sec	—	20	95	250	410	750	410	850	550	900	330
*Max. Perm.	—	100	183	1100	1030	1710	3300	4300	3800	3000	750
*Sat. Flux Density	Gauss	1500	1900	4200	3100	3800	3200	3400	2800	2000	2900
*Residual Mag.	Gauss	1000	830	2700	1320	1950	1050	1470	1500	700	1600
*Coercive force	Oersted	5.0	3.0	2.1	1.0	.65	.25	.18	.35	.30	.80
Temp. Coef. of initial perm.	%/°C	.15	.04	.40	.30	.25	1.3	.66	.80	.30	.22
Curie Point	/°C	300	260	330	165	160	160	150	125	70	180
Vol. Resistivity	ohm-cm.	1x10 ⁷	2x10 ⁵	2x10 ⁶	3x10 ⁷	4x10 ⁵	1.5x10 ⁶	1x10 ⁴	2x10 ⁴	2x10 ⁵	5x10 ⁷
Loss Factor:	—	.0005	.00016	.00007	.00005	.00008	.00008	.00030	.0004	.0003	.00055
At 1 mcs/sec	—	.0007	.0011	.0008	.0012	.002	.00075	.00155	.001	.005	.0004
At 5 mcs/sec	—										

*Measurements made on D.C. Ballistic Galvanometer with Hmax = 25 oersted. Above data based on nominal values



General CERAMICS and STEATITE CORP.
 Perth Amboy 4-5100

GENERAL OFFICES and PLANT: KEASBEY, NEW JERSEY

MAKERS OF STEATITE, TITANATES, ZIRCON PORCELAIN, FERRAMICS, LIGHT DUTY REFRACTORIES, CHEMICAL STONWARE, IMPERVIOUS GRAPHITE AND FERRAMIC MAGNETIC CORES

Dependable Electronic Tubes for...

**TRANSMITTING • RECTIFYING • INDUSTRIAL
SPECIAL PURPOSE • TELEVISION**



F-5680
Used in broadcasting and industrial applications up to 50 Mc.

F-134

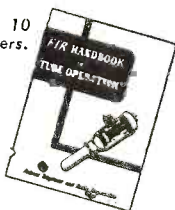
Used in high power broadcasting and industrial service up to 22 Mc.



F-892-R
Used in 5 and 10 KW AM transmitters.



TV TUBE



HANDBOOK OF TUBE OPERATION

72 Page booklet giving complete technical data on how to obtain longer service life from your power vacuum tubes. Write Dept. K-613 for your copy.

FEDERAL TV PICTURE TUBES Federal has the precise tube for your popular-size TV tube replacements... rectangular or round with a new high in light output... thrilling performance... long service life.

OVERLOAD RADIATION SWITCH

FOR THE PROTECTION OF RADIATION COOLED POWER TUBES

This new device will increase the life of your tubes. Used in conjunction with any tube, providing the radiant energy at the switch is not less than 1 watt per square inch. When an overload occurs, the device will give an alarm, cut off plate voltage or reduce the plate voltage until difficulty is corrected - When the overload is no longer present, the device will reset automatically. Adjustment is extremely simple - Ask for bulletin.



Basic Technical Data Covering The Complete Line of FEDERAL POWER TRIODES

WATER COOLED

TYPE	DESCRIPTION	Maximum Plate Dissipation	Mu	Maximum Plate Input	Maximum DC Plate Voltage	Maximum Frequency for Maximum Ratings	Filament Voltage
F-6009	HF General Purpose	6KW	25	12KW	6,000V	30MC	13
F-891	General Purpose	6	8.5	18	12,000	1.6	11/22
F-129-B	HF General Purpose	7.5	26	18	12,000	30	18
F-5874	Audio Amplifier	7.5	6	15	6,000		7
F-220C/320-B	General Purpose	10	40	22.5	15,000	4.0	21.5
F-343-A	General Purpose	10	40	36	18,000	4.0	21.5
F-892-A	General Purpose	10	50	30	15,000	1.6	11/22
F-858	General Purpose	20	42	40	20,000	1.5	22
F-880	HF General Purpose	20	20	60	10,500	25	12.6
F-5658	HF General Purpose	20	20.5	60	10,500	25	12
F-5771	HF General Purpose	22.5	20	60	12,500	25	7.5
F-342-A	General Purpose	25	40	50	20,000	4.0	20
F-9C23	HF General Purpose	25	32	50	15,000	20	22
F-110X	General Purpose	25	40	10	20,000	40	28
F-342-A	RF Triode	25	40	10	20,000	40	20
F-631	General Purpose	25	40	10	20,000	20	28
F-124-A	HF General Purpose	40	42	135	20,000	20	13.6 per section
F-9C30	HF General Purpose	40	42	120	15,000	20	7.5 per section
F-125-A	Audio Amplifier	40	4.75	100	15,000		13.6 per section
F-9C28	Audio Amplifier	40	4.75	100	15,000		7.5 per section
F-895	HF General Purpose	40	37	140	17,000	6	19 per section
F-5918	HF General Purpose	70	37	300	17,500	22	28.5
F-862-A	General Purpose	100	45	200	20,000	1.6	33
F-898-A	General Purpose	100	45	200	20,000	1.6	16.5 per section
F-134	HF General Purpose	150	21	450	20,000	22	25

AIR COOLED

F-127-A	HF General Purpose	200W	38	950W	3,000V	30MC	10
F-212-E	General Purpose	275	16	700	2,000	4.5	14
F-128-A	HF General Purpose	600	36	3	3,500	30	11
F-132-A	Audio Amplifier	600	10	1.8	3,500		11
F-7C26	VHF Amplifier	1 KW	17	3	3,000	150	9.0
F-7C23	Pulse	1.2	25		17,000	5	11.0
F-5680	Pulse	1.2	25		17,000	5	13.0
F-5996	HF General Purpose	2.5	25	12	6,000	30	13.0
F-7C25	HF Industrial	2.5	25	12	6,000	30	13.0
F-3X2500A3	VHF Amplifier	2.5	25	5.6	4,500	50	11
F-891-R	General Purpose	2.5	20	8	4,000	110	7.5
F-892-R	General Purpose	4	8.5	15	10,000	1.6	11/22
F-129-R	HF General Purpose	4	50	18	10,000	1.6	11/22
F-343-AA	General Purpose	5	26	18	12,000	30	18
F-220CA/320BA	General Purpose	5	40	20	18,000	4	21.5
F-8C25	General Purpose	5	40	22.5	15,000	4	21.5
F-5667	Audio Amplifier Industrial, HF	5	6	10	5,000		7
F-124-R	General Purpose	7.5	21	20	10,000	22.5	11.0
F-9C31	HF General Purpose	20	42	100	20,000	20	13.6 per section
F-9C29	HF General Purpose	20	42	100	15,000	20	7.5 per section
F-6179	Audio Amplifier	20	4.75	50	15,000		7.5 per section
	Audio Amplifier	50	4.75	40	15,000	30	27.2

Federal also manufactures vacuum tubes for Rectifying and for Special Purpose; for Television (round and rectangular)



Federal Telephone and Radio Corporation

100 KINGSLAND ROAD, CLIFTON, NEW JERSEY

In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.

FEDERAL'S AUTOMATIC CIRCUIT CHECKER

For the Simultaneous Check of Continuity • Transpositions • Shorts

Federal's Automatic Circuit Checker provides a very simple and reliable means for checking and cabling of circuit equipment such as telephone installations, telephone switchboards, communication receivers and transmitters, electronic navigational aides, radio and television sets and cable forms and harnesses. This high speed tester accurately locates wiring discrepancies and reduces test time to a minimum — thereby

cutting production costs. Each conductor is simultaneously checked against all other conductors and ground for: continuity, short circuits, grounds and transpositions. The flexibility of the design permits ready adaptation to varied types of equipment. Federal's Automatic Circuit Checker when used with an electronic bridge checks the resistance of all components wired in the various circuits.



**AUTOMATIC
CIRCUIT
CHECKER**

FEDERAL'S MAGNETIC SIGNAL

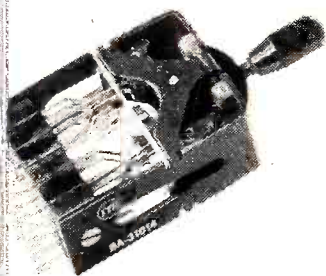
Federal's modern Magnetic Drop Signal is outstanding for fast indication and dependable performance . . . under rugged conditions . . . in total darkness. Compact and efficient, this device replaces mechanical operation common to the drop signal. Meets military requirements. Its features include: high-sensitivity; resistance against dust, dirt and moisture; vibration-resistant construction; is non-positional; luminous indicator; signal mechanically restored. A

self contained sensitive indicator. Designed to operate on 8 ma of d.c. or a.c. power. On closure of circuit the target is closed to rotate 90 degrees around its axis presenting a luminescent white surface in place of the normal black surface to indicate a changed condition. As the target rotates, a contact is closed which can be used to actuate other means of signalling such as audio devices.



**MAGNETIC
SIGNAL**

FEDERAL'S MINIATURE ANTI-CAPACITY SWITCHING KEY



airborne and other equipment—when compactness and light weight are important factors. A miniature, light-weight key with 8 "Break-Make" contacts. Each group of 12 contact springs each actuated by a molded phenolic drive with a simple motion of the lever. The contacts are non-locking. Contact springs are molded into units of 4 springs formed and pre-tensioned which reduce adjusting of springs after assembly to a minimum. The complete key pileup consists of 6 interlocking key blocks, mounted into frame with screws. Meets military requirements.



MINIATURE TRANSFORMERS

Miniature Hermetically Sealed input, output and inter-stage Audio Transformers, featuring Federal's new hermetically sealed terminal. Hermetically sealed power transformers and chokes. Meets government specifications.



TELEPHONE TYPE RELAYS



Telephone type relays available with a wide variety of contact combinations and ratings. Single and double coil combinations are available with coil resistances ranging from a few ohms to several thousand ohms.

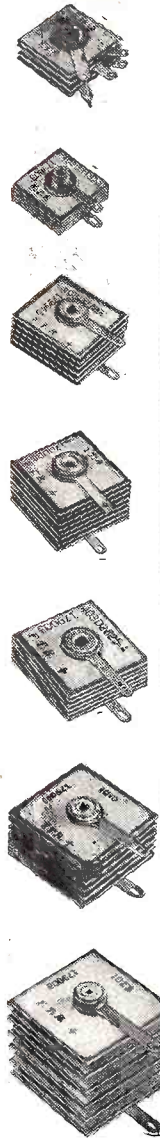


FEDERAL'S NEW TERMINAL HEADER

For Hermetic Sealing and Miniaturization

Provides greater-than-ever ruggedness, efficiency and service life for transformers, capacitors, condensers, relays and many other sealed components. Meets all requirements of MIL-T-27, Grade 1, Class A. "Floating Electrode" construction. Withstands unusually severe vibration and shock without affecting the hermetic seal. Also retards DC plating. Temp. range: -65 degrees to Plus 500 degrees F. Standard headers supplied with a ceramic of contrasting color in the first terminal location — simplifying terminal number identification on the finished component.

The revolutionary circuit elements that have led the way to important design advances in TELEVISION & RADIO RECEIVERS & ELECTRONIC EQUIPMENT. Wherever DC power is required there is a Federal Radio-TV Selenium Rectifier to do the job... and do it with an efficiency and reliability that is backed by the outstanding reputation of Federal—America's oldest and largest manufacturer of Selenium Rectifiers.



● Federal Cat. No.	Max. Output MA-DC	Max. Input (RMS) Volts	Max. Input (RMS) MA	Min. Ser. Res. Ohms	Peak Inverse Volts (Max.)	Peak Current (Max.)	▲ Construction and Nom. Cell Size	Application
1159	20	130	54	50	380	200	3/8" Dia. (T)	B+ Booster; Bias
1214A	50	130	135	35	380	500	11/16" Square (E)	B+ Radio, UHF Converter
1002A	65	130	175	22	380	650	1" Sq. (E)	B+ AC-DC (5 tube)
1003A	75	130	200	22	380	750	1" Sq. (E)	B+ 3-way Radios
1101A	100	130	270	22	380	1000	1" Sq. (E)	B+ Radios, Television
1004A	100	130	270	22	380	1000	1 1/4" Sq. (E)	B+ Radios, Television
1005A	150	130	410	15	380	1500	1 1/4" Sq. (E)	B+ Radios, Television
1006A	200	130	540	5	380	2000	1-17/32" Sq. (E)	B+ Television
1010	250	130	675	5	380	2500	1-17/32" Sq. (S)	B+ Television
1028A	250	130	675	5	380	2500	1-17/32" Sq. (E)	B+ Booster; Bias
1087A	275	130	740	5	380	2750	1-17/32" Sq. (E)	B+ Television
1090A	300	130	810	5	380	3000	1 17/32" Sq. (S)	B+ Television
1023A	350	130	945	5	380	3500	1 3/4" Sq. (S)	B+ Television
1130A	400	130	1080	5	380	4000	2" Sq. (S)	B+ Television
1021A	450	130	1200	5	380	4500	2" Sq. (S)	B+ Television
1200A	600	130	1600	5	380	6000	2 1/2" Sq. (S)	B+ Television
1223A	750	130	2000	5	380	7500	2 1/2" Sq. (S)	B+ Television
1014A	100	160	270	22	460	1000	1 1/4" Sq. (E)	Vibrator
1022A	450	160	1200	5	460	4500	2" Sq. (S)	B+ Television
1233	20	260	54	50	740	200	3/8" Diam. (T)	B+ Booster
1007A	75	160*	200	22	460	750	1" Sq. (S)	Vibrator Doubler
1008A	100	160*	270	22	460	1000	1 1/4" Sq. (S)	Vibrator Doubler
1009A	200	160*	540	5	460	2000	1-17/32" Sq. (S)	Vibrator Doubler
1015	150	25	175	..	35	750	1" Sq. (E)	Bridge Rectifier
1016	300	25	350	..	35	1500	1 1/4" Sq. (E)	Bridge Rectifier
1017	600	25	700	..	35	3000	1-17/32" Sq. (E)	Bridge Rectifier
1013	360	9†	..	..	..	..	1-17/32" Sq. (E)	Battery Charger
1018	1600	26‡	..	..	..	..	4 1/4" lg. (Mtg. Plt.)	Battery Charger
1001A	75	20	200	..	35	750	1" Sq. (E)	Bias Rectifier

▲(E) Eyelet. (S) Stud. (T) Paper Tube.

*These rectifiers have two sections—characteristics given apply to one section only; if both sections are used in series, voltage input is 320 volts.

†The characteristics given for this rectifier are based on its use in a half-wave rectifier circuit with a 3-cell battery load.

‡The characteristics given for this rectifier are based on its use in a full-wave rectifier circuit with a 3-cell battery load.

● 'A' after code number indicates locking lug.



FEDERAL'S RADIO-TV SELENIUM RECTIFIER HANDBOOK

84 pages of valuable designs, characteristics and application. Available for 25 cents (coin only).

SELENIUM RECTIFIER EQUIPMENTS

**QUALITY-BUILT
MAGNETIC AMPLIFIERS**
Powered by Quality Controlled

Federal

SELENIUM RECTIFIERS

Presently used in a wide range of successful applications for industry and the Armed Forces, such as:

- Voltage Control
- Current Control
- Speed Control
- Position Control
- Temperature Control
- Photoelectric Control
- Counting
- Automatic Regulation

Federal Selenium Rectifiers, in partnership with the right magnetic components, provide Magnetic Amplifiers outstanding for:

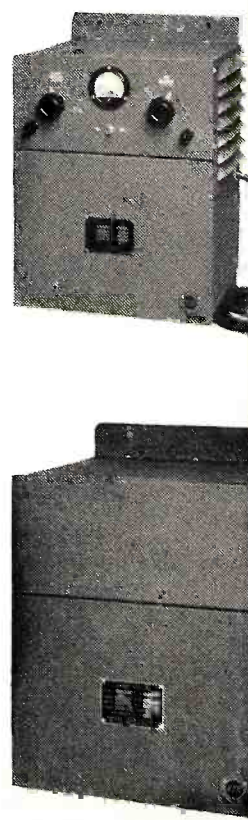
- Stability
- High Gain
- Accuracy
- Low-cost Operation
- Long Life
- Fast Response
- Automatic Regulation

Submit your magnetic amplifier requirements to Federal—write to Dept. F-53-B

POWER SUPPLIES: Designed to furnish a dependable and constant source of D-C power. Whether for industrial or laboratory use, these equipments are available in sizes to serve your requirements. For industrial requirements they are used to power magnetic equipment such as chucks, brakes, clutches, screens, separators, drums and pulleys, and also provide power for lifting magnets, relays, circuit-breakers and D-C motors.

Code Number	A-C Input		D-C Output	
	Volts	Phase Cycles	Volts	Amps.
FTR 3246-BS*	115	1	60	6 10
FTR 3352-BS	115	1	50/60	5/10 20/10
FTR 3093-AS*	115	1	60	12 3
FTR 3138-BS*	115	1	60	12 5
FTR 3185-AS*	115	1	60	12 7.5
FTR 3339-BS	115/230	1	50/60	6-24 18
FTR 3341-AS	115	1	50/60	28 5
FTR 3128-BS**	115	1	60	22-30 10
FTR 3300-DS	115	1	60	2-32 50
FTR 3340-BS	115	1	50/60	5-70 12
INDUSTRIAL				
FTR 3115-JS	115	1	50/60	115 1
FTR 3116-BS	115	1	50/60	115 5
FTR 3117-HS	115	1	50/60	115 10
FTR 3117-JS	230	1	50/60	115 10
FTR 3152-AS	220/440	3	50/60	115/230 4.4/2.2
FTR 3153-AS	220/440	3	50/60	115/230 6.6/3.3
FTR 3154-AS	220/440	3	50/60	115/230 8.8/4.4
FTR 3155-AS	220/440	3	50/60	115/230 13/6.5
FTR 3228-BS	220/440	3	50/60	115/230 26/13

**Filtered and regulated equipment. *Filtered.



THE SELENIUM RECTIFIER DIVISION

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GOVERNMENT CONTRACTORS

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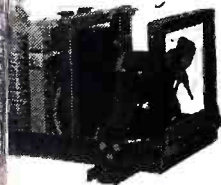
The Selenium Rectifier Division of Federal — the nation's headquarters for selenium rectifiers — is ready to serve you with start-to-finish production of power supplies, battery chargers, voltage regulators, engine starters, cathodic protection and other units—compact, rugged, quiet, dependable power equipments designed for any DC output.

Federal knows selenium rectifiers. Federal has unmatched power conversion experience . . . an experience backed by years of successfully meeting the rigid requirements of contracts for military equipments. And Federal has the capacity to deliver your orders — when you want them!

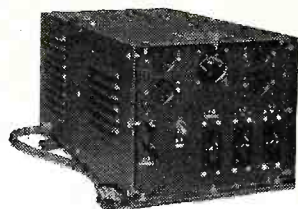
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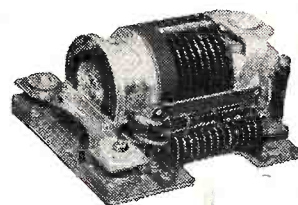
Y-DUTY FEDERAL SELENIUM RECTIFIER



146-BS AIRCRAFT POWER SUPPLY



FTR 3414-AS GROUND AIRCRAFT POWER SUPPLY

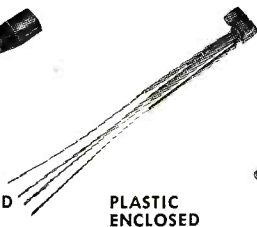


FTR 3141-CS CLIP-IN VOLTAGE REGULATOR

H VOLTAGE SELENIUM RECTIFIERS



HERMETICALLY SEALED GLASS ENCLOSED



PLASTIC ENCLOSED

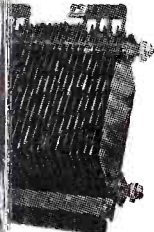


FIBRE ENCLOSED

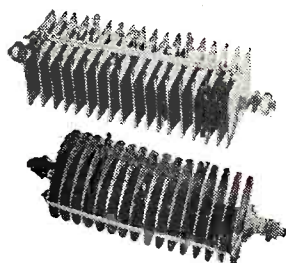
Federal Code Number	DC Output Voltage	Max. Output MA-DC	Max. Peak Inverse Voltage	AC Input Voltage
147H110Q1	1400	8	4000	1400
147H 82Q1	1050	8	3000	1050
147H 55Q1	700	8	2000	700
147H 28Q1	350	8	1000	350

SELENIUM RECTIFIERS for Industrial Service From AC to DC . . . Milliwatts to Kilowatts

Low-cost power conversion . . . efficient, dependable . . . from a-c to d-c. Introducing new, broad range adaptability in diverse fields, conditions and applications. They obtain direct current from any alternating current source. They are small, light, easy to install. They meet all needs of an unattended service.



FOR COMPLETE DATA Write for Federal's Data Booklet on Selenium Rectifiers. An informative guide to characteristics and applications of the industry's most comprehensive line of high quality rectifiers. Address Dept. 913.



The FEDERAL System of ENCAPSULATION

Federal's new method of encapsulating selenium rectifiers and allied components presents an entirely new approach to civilian and military equipment design — particularly where environmental or other unusual conditions necessitate special applications. It is now possible

assemble transformers, capacitors, resistors and other components — interconnected — into single blocks of equipment. Such assembly facilitates the replacement of individual as well as entire groups of components without the necessity of time-consuming repairs. Assures excellent thermal shock characteristics and resistance to vibration and cracking of the sealed unit over wide temperature ranges. Embedments withstand low temperatures to -55°C, as well as high temperatures to plus 125°C. Send for Bulletin F 534 for complete details.

FEDERAL CONTACT PROTECTOR

The Federal Contact Protector permits a rise but not high enough to cause arcing; then the voltage decays to correct line voltage. Its features include:

1. Suppresses contact arcing
2. Extends Contact Life by more than 100 times
3. Reduces circuit failure due to contact erosion (locking, surging, etc.)
4. Minimizes RF Interference
5. Has negligible effect on speed of operation of circuit
6. Needs no attention
7. Is easily installed
8. Requires little space
9. Is low in cost
10. Available as hermetically sealed unit to meet all JAN specifications.

Federal Telephone and Radio Corporation

100 KINGSLAND ROAD, CLIFTON, NEW JERSEY

In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.

FEDERAL VARIETY OF CABLE TYPES

Federal's cable division produces a variety of H-F cable types. Some of these cables are produced by Federal exclusively. All are made to the most exacting standards of quality and control. The materials used

are the finest research has developed, assuring electrical characteristics. Initial dimensional precision helps to maintain stability over a wide temperature range.



SOLID DIELECTRIC COAXIAL CABLES

consist of a solid or stranded inner conductor, dielectric material, one or two copper wire braids, a synthetic resin protective jacket and, in some cases, a protective armor or

metal braid. Dual coaxial cables are in design to the solid dielectric types, that two accurately-spaced inner conductors are used.



LOW-CAPACITANCE COAXIAL AIR-SPACED CABLES

have a construction similar to that of the solid dielectric types, except that air is made a portion of the dielectric. One method of accomplishing this effect and still maintaining a high dielectric strength is through a con-

struction involving an inner conductor in a thin-walled dielectric tube. This is accomplished by means of a dielectric thread wound in a long spiral.



SPIRAL DELAY, HIGH IMPEDANCE LINES

are constructed with an inner conductor spiraled around a center dielectric core and covered with dielectric, braid and jacket. In

one typical design each foot has an electrical length equivalent to approximately one foot of coaxial cable of similar diameter.

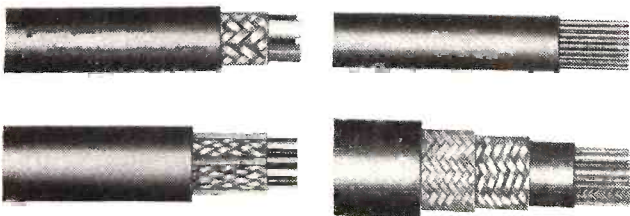


TELEVISION ANTENNA LEAD-IN WIRE

consists of two accurately-spaced conductors over which is extruded the dielectric material. These lead-in wires have no braid, jacket or armor, except in special cases. The advances

in television have meant ever-new approaches to the design of TV lead-in to the point of antenna. It has taken many varied forms, the latest being the tubular shaped "pipeline" lead-in.

SPECIAL CABLE PROBLEMS



Federal Telephone and Radio Corp. maintains a stock of most of the required types. When requirements are so special that they cannot be met by Federal's cable types, Federal research and engineering facilities are readily available to develop any new cable constructions. Charges are based on quantity. Special Orders — like all Federal production — are executed under the high standards maintained by Federal "Quality Control." Every length of cable is carefully checked to see that it meets all tests indicated for the type ordered. Toughness, heat resistance, moisture resistance, dielectric strength, cold-bend — these are just a few of the many tests that must be passed before approval for shipment is given. Federal's consulting service is yours for the asking.

Federal also manufactures many types of plastic-insulated wires and multi-conductor cables for television, intercom, and numerous special purposes.

COMMUNITY TV COAXIAL CABLE

FEDERAL'S "BIG 5" — The answer to any Community TV lead-in problem . . . Engineered for long life, low line loss and DEPENDABLE all-weather signal transmission . . . over the longest link. Federal's K-14, RG-11/U and RG-59/U are the H-F coaxials you can specify with utmost confidence . . . for community TV Distributing Systems in any area . . . for any amplifier system used.

Wherever the annoying, profit-eating problems of signal leakage and revenue loss exist, the answer is Federal's new K-125 and K-126 radiating alternates for RG-11/U and RG-59/U — used in conjunction with Federal's K-14 — the primary lead-in famous for lowest line loss, longest cable runs and fewer amplifiers required. Both K-125 and K-126 are double-shielded and double-jacketed.

All of the "BIG 5" are made to Federal's high standards of quality and that means dependable, all-weather transmission performance.

Principal characteristics of Federal's "BIG 5" of Community TV Coaxial Cable

TYPE	ZO Impedance Ohms	Capacitance per ft. micro-micro farads	DB per 100 Feet				Jacket OD Mills	Weight 1000
			50Mc	100Mc	200Mc	400Mc		
K-14	72	21	.57	.90	1.42	2.3	870	
RG-11/U	75	20.5	1.5	2.15	3.2	4.7	415	
RG-59/U	73	21	2.7	4.0	5.7	8.5	250	
K-125	72	20.5	1.5	2.15	3.2	4.7	460	
K-126	73	21	2.7	4.0	5.7	8.5	315	

COMPLETE COAXIAL CABLE ASSEMBLIES

also are available from Federal to meet your requirements. Federal's service offers the same "Precision Production" that made Federal an outstanding name in coaxial cables.



Federal Telephone and Radio Corporation

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It's *Federal* for ... EVERY H-F TRANSMISSION LINE REQUIREMENT

An Original Development
by Federal

RG TYPE CABLES

WITH THE NEW
LOW-TEMPERATURE
NON-CONTAMINATING
THERMOPLASTIC JACKET

Two types of jackets are used by Federal for its standard coaxial cables. The first is Poly Vinyl Chloride, a rugged material capable of standing the tests of time and temperature. This jacket material is contaminating; that is, the migration of the plasticizer through the braid into the dielectric results in some loss of dielectric strength and increase of attenuation after long use.

The second is a non-contaminating vinyl which has all the properties of Poly Vinyl Chloride but will not contaminate the dielectric at temperatures above -25 degrees C.

Federal engineers discovered that under certain severe operating conditions (below -25 degrees C) the second type of vinyl jacket would not withstand the low temperature. To eliminate contamination and solve the cable industry's problem of meeting cold bend requirements of the military services, Federal developed a new low-temperature, non-contaminating thermoplastic jacket—meeting all requirements of the "Exceptions to Specifications JAN-C-17A" (dated March 21, 1949, and amendment thereto dated January 9, 1950).

JAN-C-17A requires conditioning of the cable at -40 degrees C for 20 hours. It is wrapped around a mandrel 10 times the diameter of the cable. The cable is heat-aged for two weeks at +80 degrees C. It is then conditioned again at -35 degrees C for 20 hours, and another cold bend test applied. At no time during the bend tests can fractures or cracks appear on either the jacket or the dielectric.

The new RG types are outstanding for their longer service life under the most adverse conditions. Their non-contaminating feature means there is no reduction in dielectric strength due to molecular migration. They are a primary example of Federal leadership in the development and production of top-quality H-F coaxial cables.

Type	Low Temp. Blk. Jacket Δ	Zo Impedance Ohms	Capacitance Per Foot Micro-Micro Farads	Db/100 Freq./Mc 100 (Max.)	Inner Conductor Strands	Braid +	Jacket X
1/U	RG-5B/U	53.5	28.5	2.9	C1	C264	V339
2/U	RG-6A/U	76	20	2.9	CW1	CS264	NCV339
3/U		100	12.5	2.4	C1	C304	V379
4/U	RG-8A/U	52	29.5	2.1	C7/#21	C340	V415
5A/U	RG-9B/U	52	30	2.3	CS7/#21	CS355	NCV430
6O/U††	RG-10A/U	52	29.5	2.1	C7/#21	C340	NCV475
71/U	RG-11A/U	75	20.5	2.15	T7/#26	C340	V415
82/U††	RG-12A/U	75	20.5	2.15	T7/#26	C340	NCV475
93/U	RG-13A/U	74	20.5	2.15	T7/#26	C355	V430
104/U	RG-14A/U	52	29.5	1.5	C1	C463	NCV558
115U		76	20	1.5			
127/U	RG-17A/U	52	29.5	.95	C1	C760	NCV885
138/U††	RG-18A/U	52	29.5	.95	C1	C760	NCV945
149U	RG-19A/U	52	29.5	.69	C1	C990	NCV1135
150/U††	RG-20A/U	52	29.5	.69	C1	C990	NCV1195
161/U	RG-21A/U	53	29.5	14.0	Res.	CS264	NCV339
172/U	RG-22B/U	95	16	4.4	*C7/0.0152"	T340	V415
182A/U		95	16	4.0	*C7/0.0152"	T345	NCV426
193/U	RG-23A/U	125	12	1.7	*C7/#21	C830x440	V960x670
204/U††		125	12	1.7	*C7/#21	C830x440	1034x735
219/U		53.5	28.5	5.3	C1	C176	PE206
224/U	RG-34A/U	71	21.5	1.32	C7/#21	C540	V645
235/U††	RG-35A/U	71	21.5	.90	C1	C760	NCV945
244A/U		58	26.5	3.1	C7/0.0152"	T220	PE250
255/U		53.5	28.5	4.8	C1	C150	PE184
267/U	RG-57A/U	95	17	3.0	*C7/#21	T540	V640
278/U	RG-58B/U	53.5	28.5	5.3	C1	T150	V200
288A/U	RG-58C/U	52	28.5	6.2		C191	V250
299/U	RG-59A/U	73	21	4.0	CW1	C191	V250
302/U	RG-62A/U	93	13.5	2.7	CW1	C340	V415
313/U	RG-63B/U	125	10.0	2.0	CW1	C340	V415
325/U	RG-65A/U	950	44		C1	T198	PE238
331/U		93	13.5	2.7	CW1	C463	NCV605
344/U††	RG-74A/U	52	29	1.5	C1	C340	NCV475
359U††		125	10	2.0	CW1	C340	NCV475
369B/U††		125	10	2.0	CW1	C340	NCV475
376/U		200	7.8	.56	*C7/#21		
3808/U		76	25		*77/0.0126"	T177	V240
3911/U††		95	16	4.0	*C7/0.0152"	T345	NCV490
40TYPES							
41		72	21	.90	C1	C760	NCV885
42		72	22	4.0	*C7/#30	C200	V250
4307		72	22	6.1	*C7/0.012"	C191	NCV250
440		160	8.3	8.0	B1	T232	V282
459A		300	4.2	3.4	*B1	C435x235	V490x290
463		34	39	4.5	T41/#34	C150	V200
475							
480							
4901					Phos. B7/0.0254"		PE185

Copper, T—Tinned Copper, S—Silver Plate Copper, B—Bronze, OD in mils.
Vinyl, PE—Polyethylene, NCV—Non-contaminating Vinyl, OD in mils.
Information in Column to right under RG Type Cables.

omered.
Inner Conductors.
Inner Conductor Strands column indicates material by same abbreviation as +
/—copperweld.

FOR COMPLETE DATA

Write for Federal's Catalog on HF Cables. An informative guide to characteristics and applications of the industry's most comprehensive line of high quality HF Cables. Address Dept. 913.



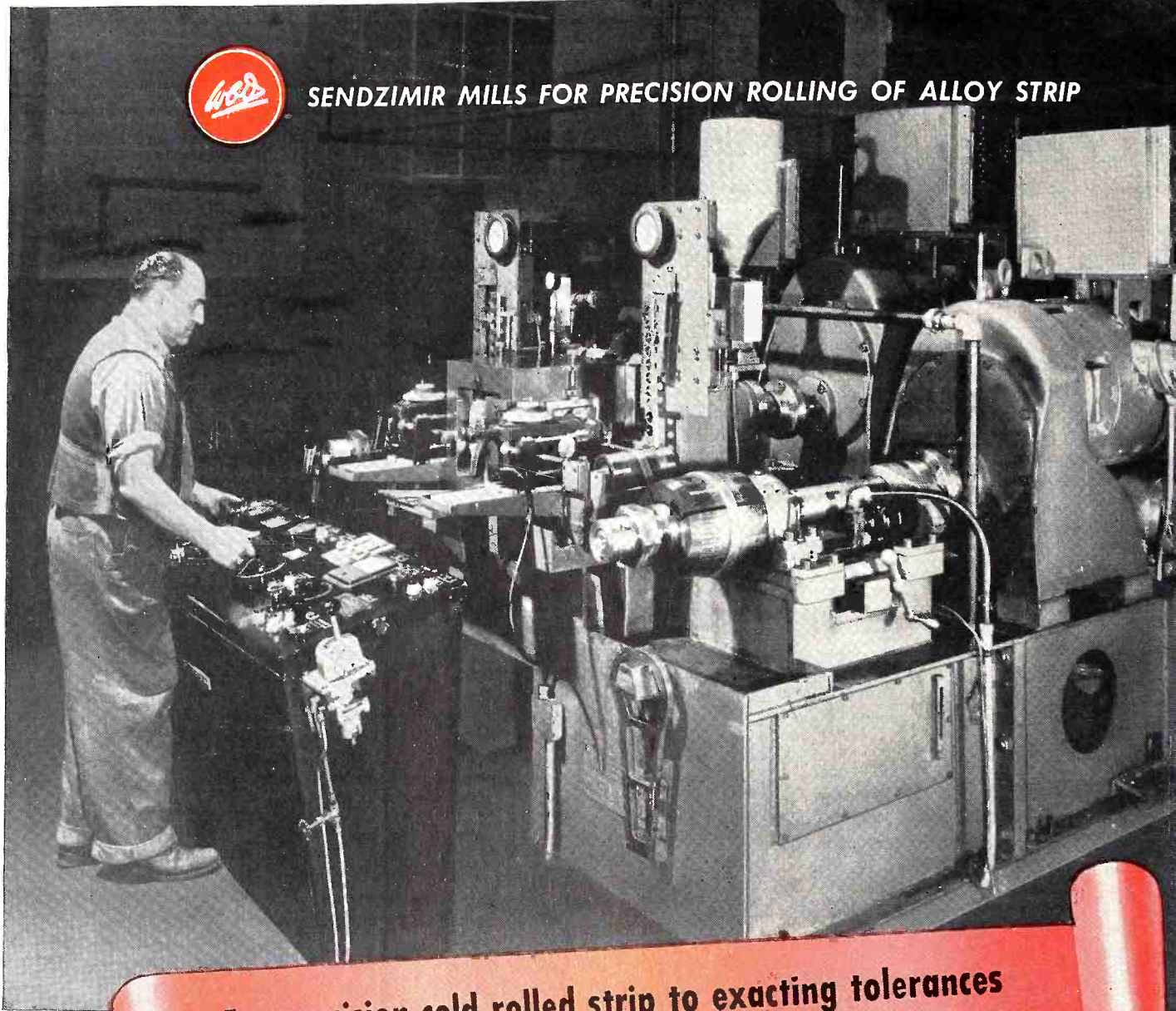
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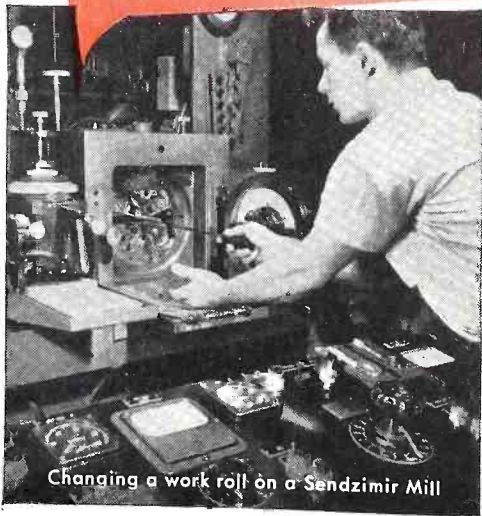
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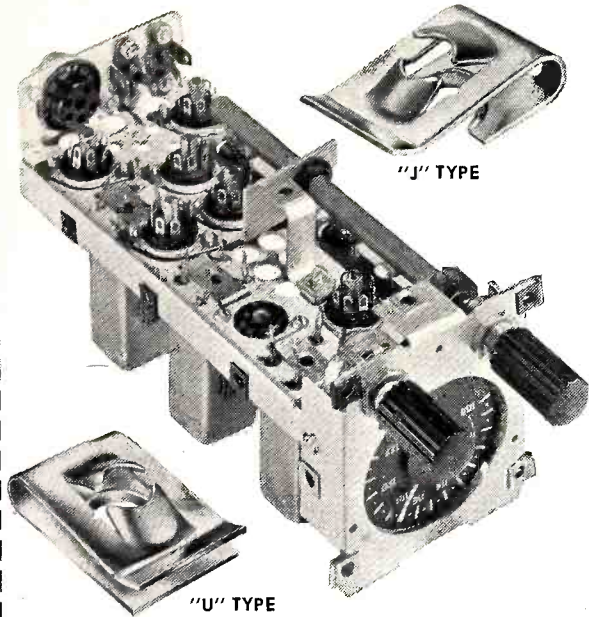


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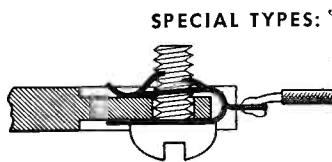


"J" TYPE

"U" TYPE

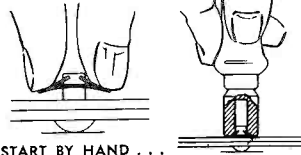
"J"-TYPE SPEED NUT brand fasteners are self-retaining in screw-receiving positions. They are snapped into place by hand and hold a constant hole alignment; are vibration-proof, require no riveting, clinching or welding.

"U"-TYPE SPEED NUTS perform the same functions as the "J" Type, but are preferred where a full bearing surface on the lower leg of the SPEED NUT is a requirement. Both are made of highest quality spring steel in a wide variety of screw sizes.



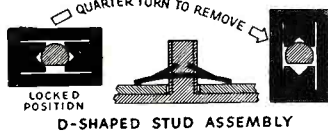
SPECIAL TYPES: "U"-TYPE SPEED NUTS are available in many special designs to meet a broad variety of applications. This example shows the "U" type with a ring shaped soldering tab for electrical connections. SPEED NUT is pressed over bakelite panel.

HOW TO APPLY



START BY HAND . . .

. . . zip down, lightning fast over studs, or any unthreaded parts with tool. Locks on smoothest, hardest surfaces; equally effective on wood, metal or plastic.



D-SHAPED STUD ASSEMBLY

An exclusive Tinnerman Push-On feature is its use over D-shaped studs. Diagram shows how 1/4-turn from locked position frees spring tension grip of spring steel prongs on stud where removability is desired.

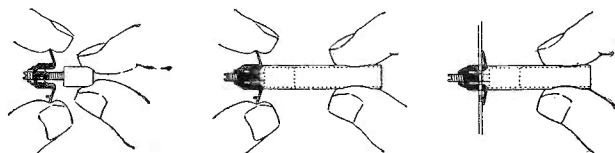
PUSH-ON TYPE

Push-On type SPEED NUTS are lightning-fast, zip over integral studs, rivets, tubing, nails or other unthreaded parts.

They provide a bite-lock that grips securely on smoothest, hardest surfaces. These self-locking, one-piece fasteners eliminate costly threaded parts, reduce machining of die castings. They provide line balance, reduce costs, speed-up production . . . are the last word in low cost fastening efficiency.

COIL FORM FASTENERS

The SPEED NUT principle of spring tension fastening is particularly adaptable to fasteners for retaining coil forms in communications equipment. SPEED NUT Coil Form Fasteners are quickly and easily installed and assure vibration-proof adjustments. Millions of SPEED NUT fasteners are performing cost-cutting assembly jobs on all types of radio, TV and communications equipment.

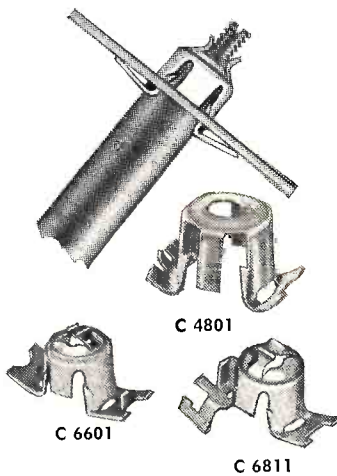


Core screw is first threaded into SPEED NUT. Prongs provide correct tension on screw.

Coil tube is inserted into the SPEED NUT and retained by means of 4 small barbs on inside of SPEED NUT.

Assembly is then snapped into chassis. Tab on leg of SPEED NUT fits into small hole in panel to prevent SPEED NUT from turning.

SPECIAL TYPES: Coil tube assembly is simplified by any one of these three SPEED NUTS. Takes only a few seconds to complete trouble-free attachment of coil tubes. SPEED NUT prongs provide constant pressure to maintain tuning adjustment. Note that C6811 has "L" shaped soldering tab. C4801 retains coil tube only and has clearance hole for core rod.



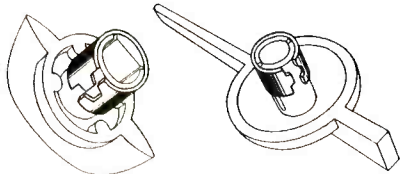
C 4801

C 6601

C 6811

COMPRESSION RINGS

Easily adapted to all thermo-plastic knob-to-shaft assemblies, they eliminate inserts, set screws; provide lower mold costs, permit thinner walled hubs. Insure permanent attachments and prevent cold-flow loosening.

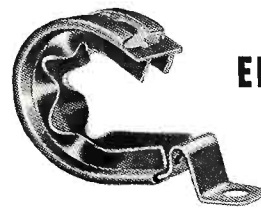


TUBULAR TYPE SPEED CLIPS



HOW TO APPLY

1. Snap into place by hand. Cam-like prongs compress, then spring out when inserted into hole, holding Clip in position.
2. Line up second part of assembly; start rivet or unthreaded stud into Clip.
3. Seat rivet; turned-in end of SPEED CLIP bites rivet makes a locked, vibration-proof attachment. Perfect where only one side of the assembly is accessible!



ELECTRICAL HARNESS CLAMPS

Provide easiest, safest attachments for wire harness installations in electronics equipment. It can be pre-assembled to wire bundles; opens and closes without the use of tools for easy servicing. Positive locking feature prevents any accidental opening. Has special extruded insulation. Available in clamp sizes from 1/8" to 1 1/16" diameter.

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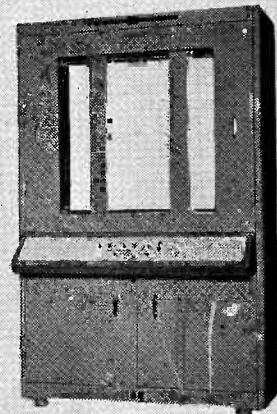
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FOR

Precision Analog Computer

Designed to meet the demand for a highly accurate, dependable, and versatile general-purpose analog computer for solving problems in dynamics for industrial, research, educational, and military groups. Features a new high-gain, low-drift, contact-stabilized d-c amplifier with outstanding frequency response and power output characteristics; centralized operation from a control console which houses the problem board and its bay, attenuators, initial condition potentiometers, limiters, and other operating controls; precision network

components contained in a controlled environment to insure reliable and accurate performance; a grounded 1800 position problem board which confines all terminal leakages to ground.



VARI PLOTTER
MODEL 205J

Variplotter - MODELS 205G and H

A self-balancing potentiometer type recorder designed to record one variable d-c voltage as a function of a second variable d-c voltage. Model 205G is a single pen board that will present a single X vs. Y plot. Model 205H has an additional arm and pen allowing it to record two independent sets of X vs. Y data simultaneously. Static error is .05 per cent of full scale at 70 degrees Fahrenheit. Dynamic error averages .05 per cent of full scale plus the static error. Standard sensitivity is 50 millivolts per inch or 1.5 volts for full scale deflection of 30 inches. Maximum writing speed is 8-1/2 inches per second. Continuously variable uncalibrated scale factor and parallax controls are provided for each axis.

Variplotter - MODEL 205J

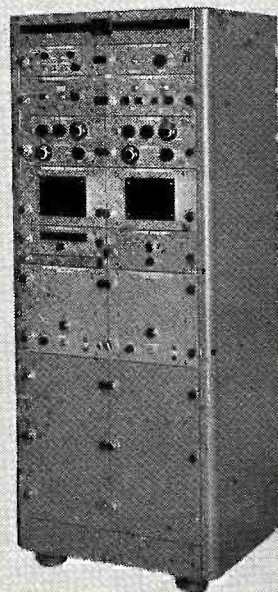
Essentially the same characteristics as the Models 205G and H described above except that the plotting surface is vertical. The plotted result, in the form of an inked line, is presented on a 30 inch square of paper which is held firmly to the plotting surface by a unique vacuum system. Static error is .05 per cent of full scale at 70 degrees Fahrenheit and dynamic error average .05 per cent of full-scale plus the static error. Maximum writing speed is 8-1/2 inches per second. Standard sensitivity is 50 milli-volts per inch or 1.5 volts for full-scale deflection of 30 inches. Where floor space is limited, the MODEL 205J Variplotter is recommended for your recording needs such as analog computer output, guided missile data, engine performance, etc.

Digi-Verter Group - TYPE 17-31A

The Digi-Verter can be used to convert digital information, such as that obtained from card reading machines or tabular lists, into analog form suitable for presentation as a point plot on a Variplotter plotting board. It is designed to accept two four-decimal digit numbers and their signs from an IBM machine such as Type 513, 517, 519, 523, etc. Complete operating controls include power switch, feed switch, input switch, storage clear, and scale factor and parallax controls for both X and Y. Scale factor will provide plot expansion up to 10 times and parallax controls allow the zero-zero origin to be located anywhere on the plotting surface. The complete digital plotting system consists of the Digi-Verter, Data Input Keyboard, Model 205G Variplotter plotting board

Functional Potentiometers

There are two models of sine-cosine potentiometers available—Type 462 which is a single unit and Type 315 which provides two sets of sine-cosine functions. Accuracy, is within .15% of the theoretical voltage for all points throughout 360° of shaft rotation. Angular resolution is .005% of 360° and electrical resolution, expressed as a percentage of the total voltage applied across one 90 degree quadrant is with .05%.



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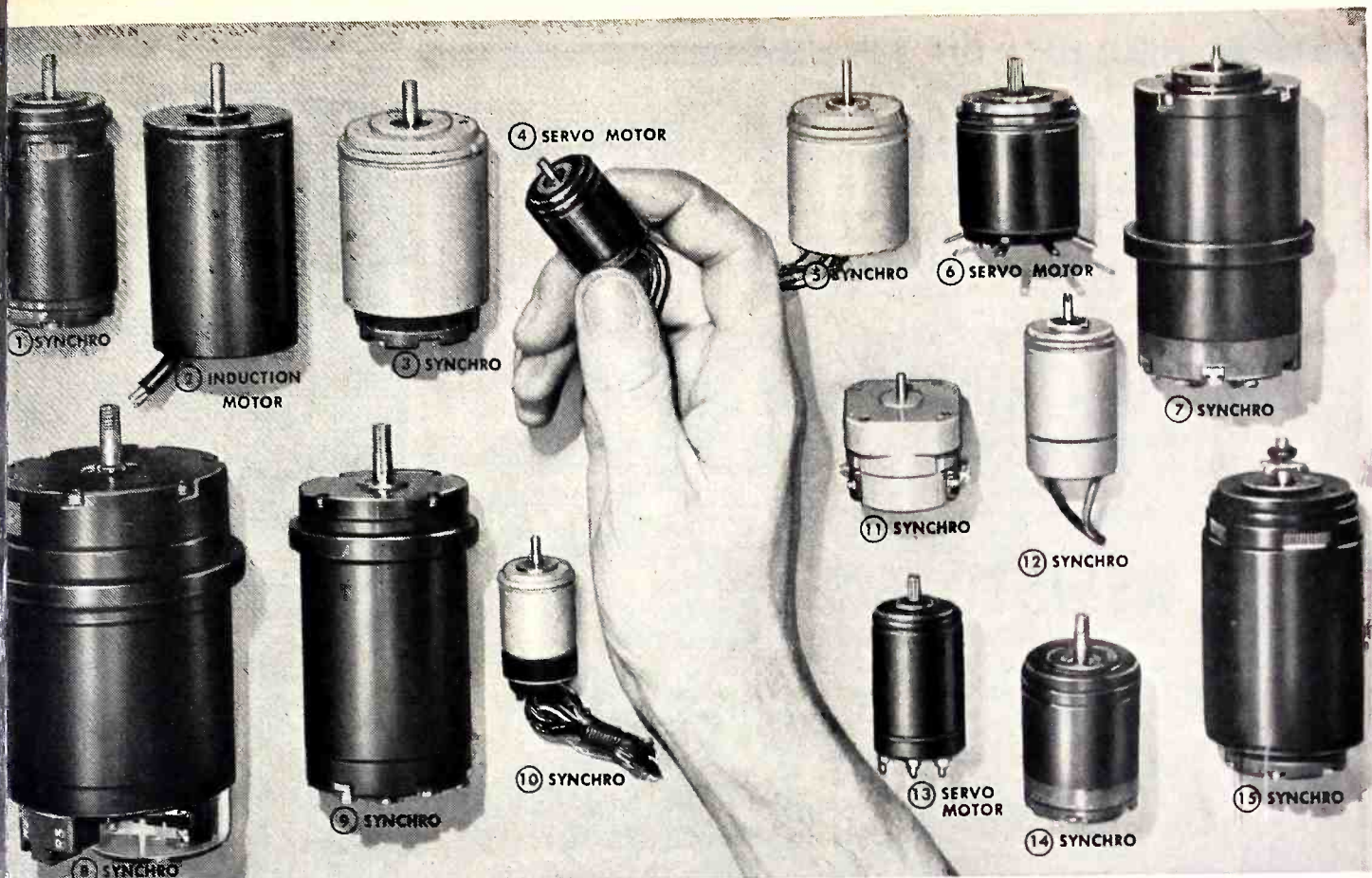
MIL-Line Types and Resistance Ranges

Military Type	Radell Type	Nominal Length ($\pm 1/16$)	Dimensions Diameter ($\pm 1/32$)	Leads ($\pm 1/8$)	Rating	Resistance Range	Maximum Working Voltage
RN15	CD 1/2 PR	1/2	5/32	1-1/2	1/2 W	25 ohms to 2 meg.	350
RN20	CD 1/2 MR	19/32	11/64	1-1/2	1/2 W	25 ohms to 2 meg.	350
RN25	CD 1/2 SR	13/16	11/64	1-1/2	1/2 W	25 ohms to 10 meg.	350
RN30	CD 2 SR	15/16	19/64	1-1/2	1 W	25 ohms to 10 meg.	1000
		2-1/16	19/64	1-1/2	2 W	25 ohms to 30 meg.	2000

Note: MIL-Line resistors are available in resistance tolerances "F," "G," and "J" (1%, 2% and 5%) and perform in accordance with temperature coefficient characteristic "X" as defined in specification MIL-R-10509A.

For complete information write Radell Corporation, United States Sales Office, 7900 Pendleton Pike, Indianapolis 25; or phone Cherry 2466.

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- SYNCHRO, Size 18, O.D. 1.750", 115 V, 400 and
60 Cycles (Transmitter, Receiver, Differential,
Control Transformer)
- SERVO MOTOR, O.D. .937", 26V, 400 Cycles
- SYNCHRO, O.D. 1.437", 14.4 V and 26 V, 400 Cycles
(Transmitter, Receiver, Resolver, Differential,
Control Transformer)
- SERVO MOTOR Mk 7, O.D. 1.437", 115 V, 400
Cycles
- SYNCHRO, Type 1F or 1HG, O.D. 2.250" 115 V,
60 Cycles (Receiver, Transmitter)
- SYNCHRO, Size 31, O.D. 3.10", 115 V 400 and 60
Cycles (Transmitter, Receiver, Differential,
Control Transformer)
- SYNCHRO, Size 23, O.D. 2.250", 26 V and 115 V 400
& 60 Cycles (Transmitter, Receiver, Resolver,
Differential, Control Transformer)
- SYNCHRO, O.D. .937", 26 V, 400 Cycles
(Transmitter, Receiver, Resolver, Differential,
Control Transformer)
- LINEAR TYPE CONTROL TRANSFORMER, O.D.
1.625", 26 V, 400 Cycles
- SYNCHRO, Size 11, O.D. 1.062", 26 V and 115 V,
400 Cycles (Transmitter, Receiver, Resolver,
Differential, Control Transformer)
- SERVO MOTOR, O.D. 1.062", 115 V, 400 Cycles
- SYNCHRO, Size 15, O.D. 1.437", 26 V and 115 V,
400 Cycles (Transmitter, Receiver, Resolver,
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(Transmitter, Receiver, Control Transformer)

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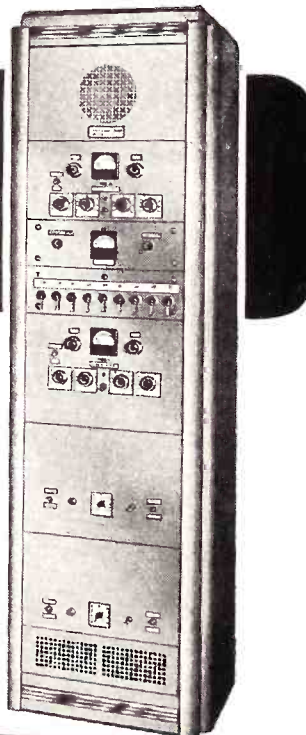
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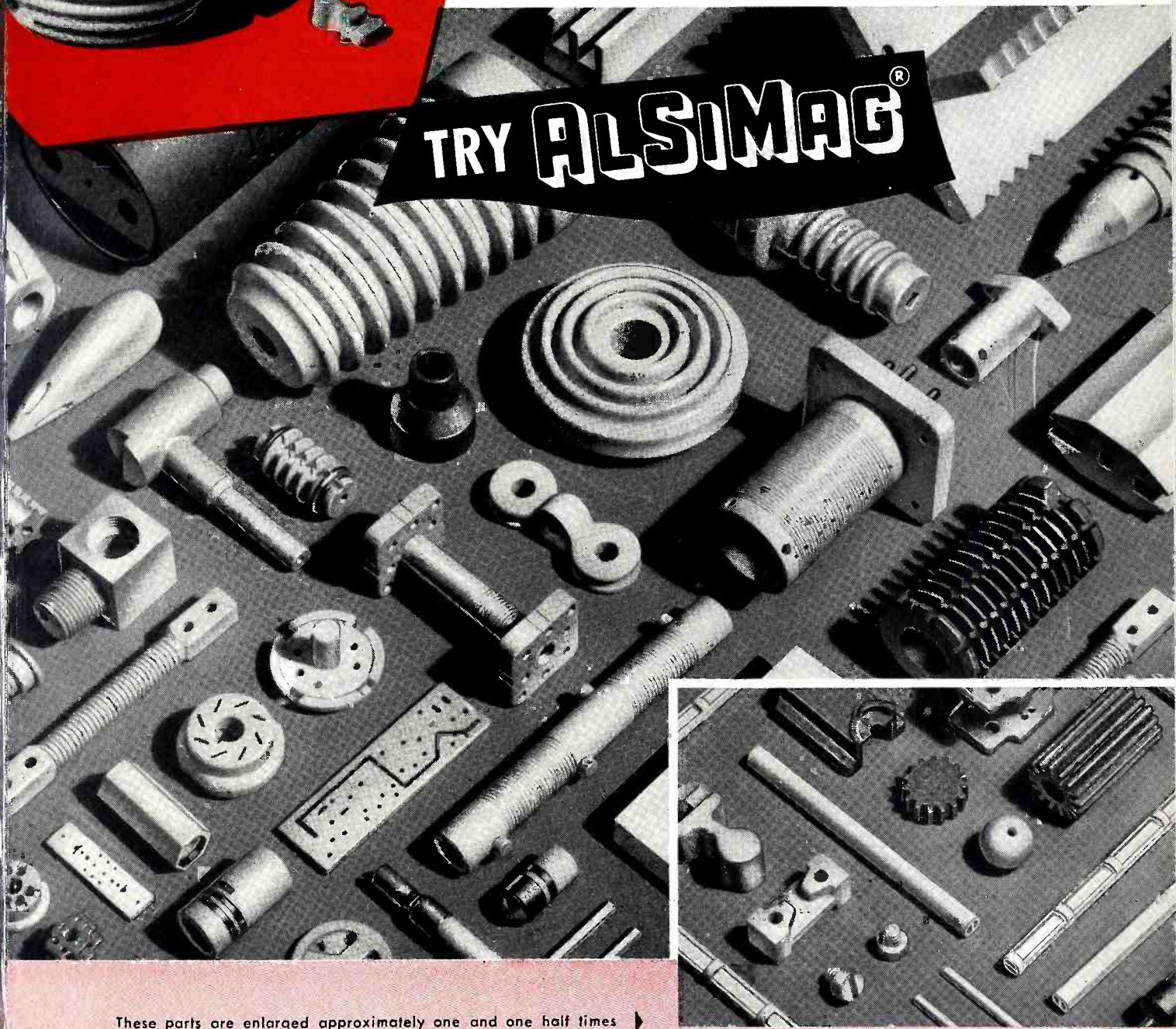
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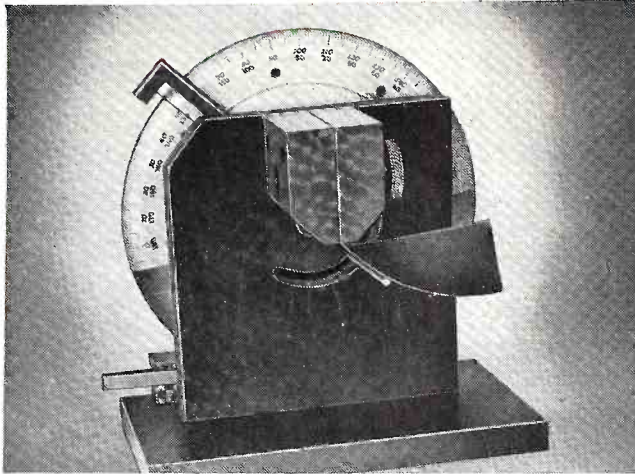
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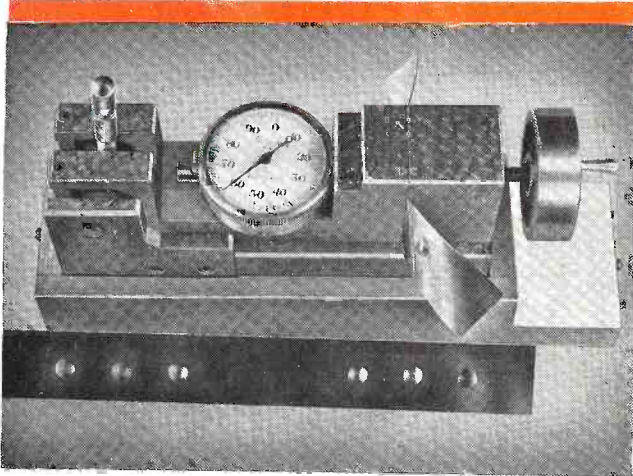
ES: METROPOLITAN AREA: 671 Broad St., Newark, N. J., Mitchell 2-8159 • PHILADELPHIA, 1649 North Broad St., Stevenson 4-2823
 WEST: John A. Green Co., 6815 Oriole Drive, Dallas 9, Dixon 9918 • NEW ENGLAND, 1374 Massachusetts Ave., Cambridge, Mass., Kirkland 7-4498
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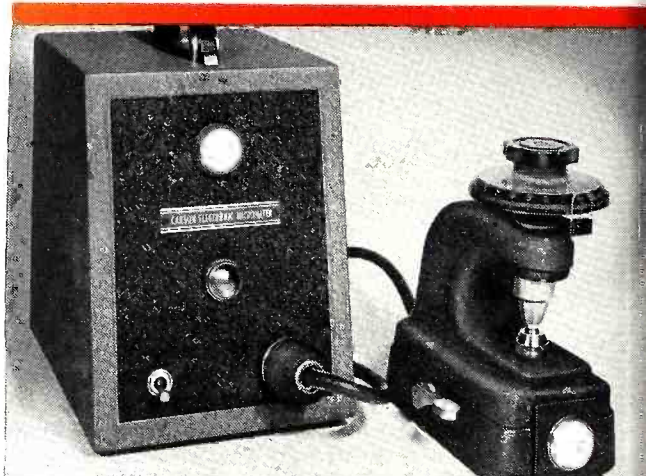
This ingenious Spring Back Tester determines the temper of strip and sheet metals for electronic parts in thicknesses of 0.020" or less. It does this by measuring the "spring-back" when specimen is released after bending.



Used to check bowed, bent and offset cathodes for degree of deformation, this Optical Comparator also checks the width and location of circumferential beads.



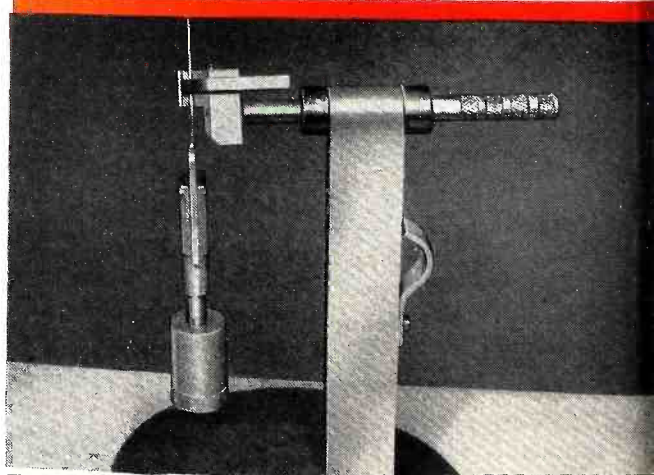
Cup-Testing Apparatus determines the amenability of very thin nickel strip to deep forming. The combination of temper, grain size, and ductility of the raw material is measured accurately.



Sensitive to .00005", this Electronic Micrometer reads cathode tolerances with repeated exactness. Light walls of Lockseam Cathodes tend to spring slightly when mechanical micrometers are used—and readings, therefore, are not exact. The Electronic Micrometer standardizes this measurement variable and supplies uniform readings.



The "E" Dimension Gauge measures the critical spacing between the ceramic surface and the surface of the emitting cap in Disc Cathodes. Tolerance limits must be accurate to $\pm 0.0005''$ since the dimension controls cut-off voltage and adds uniformity to the characteristics of cathode-ray tubes.



This Cathode Tab Tester, also developed by Superior, is used to "Production Control Test" the strength of tabs on Lockseam Cathodes. The tab is bent back and forth by the Tester until failure results. If it breaks before a specified minimum number of 90° bends are completed, the material is rejected.

Superior Specialties: SEAMLESS AND LOCKSEAM NICKEL CATHODES, CATHALOY CATHODES, DISC CATHODES, ANODES AND GRID CUPS, FABRICATED TUBULAR PARTS.

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Superior customers have often taken these things for granted. But Superior's Quality Control Program cannot take anything for granted! Rigid controls, beginning at the original melt, continue through every stage of drawing and fabrication. Result: Parts that stand up to the toughest and most precise electronics applications!

We could show only a few typical parts on these pages. So we've elected, instead, to detail our full line in literature which is yours for the asking.

If, however, you use cathodes in your work, we can supply Seamless or WELDRAWN† tubing for these parts or Lockseam* cathodes made from strip in either Nickel or Cathaloy** metals... pound or shaped to specified lengths, plain or beaded (embossed). Also anodes, grid cylinders and cups, disc cathodes, and other tubular parts for cathode ray gun structures.

Superior will be glad to work with you in developing, designing and producing the parts you need. If you have a tubing problem, get in touch with us now. The handy coupon will bring you full information, and preliminary consultation costs you nothing. There's no obligation.

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All analyses .010" to 5/8" O.D.
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CATHALOY is a new line of nickel cathode alloys for both Seamless and Lockseam type cathodes. It meets exacting requirements for low impedance, high emission and long life—assures tube reliability, increased mechanical strength, full service.



Developed in Superior Laboratories, this Collapse Tester is now accepted by A.S.T.M. The instrument is used to determine the degree of resistance to bending in finished cathodes.



The Flat-Faced Hand Micrometer checks cathode length and is accurate to .001". Conical Faced Barrel Micrometer checks wall thickness to tolerances of .0001". The Flat Faced Barrel Micrometer checks O.D. and bead dimensions, can be read to .0001". The Ultra Precision Barrel Micrometer measures shaped cathodes (O.D.) and beads and is readable to .00004". The "Go" and "No Go" pin gauges measure the inside diameter of round cathodes.

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Title.....

Company.....

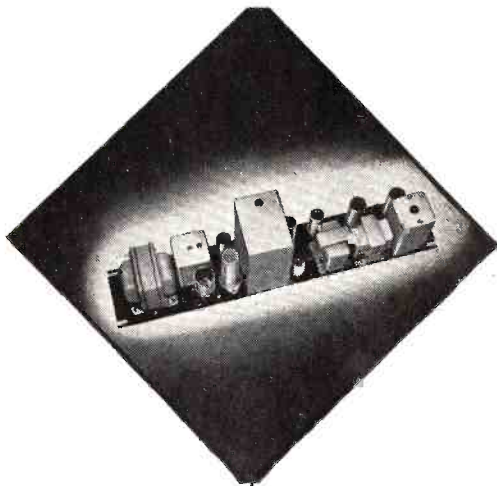
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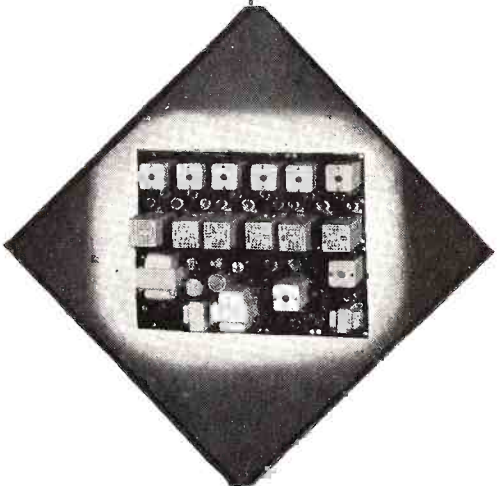
HAMMARLUND

DATA TRANSMISSION-SELECTIVE CALLING AND SUPERVISORY CONTROL EQUIPMENT



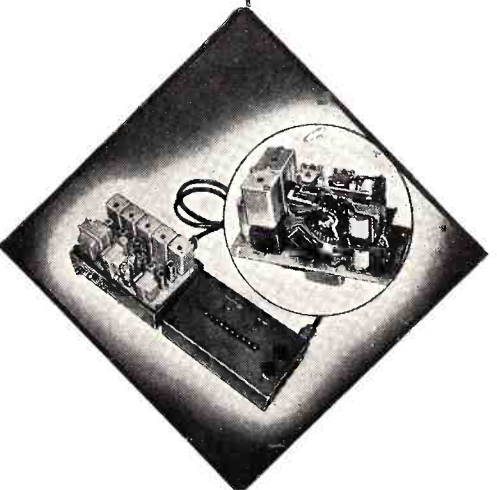
POINT TO POINT SIGNALING

The Hammarlund Standard Duplex Signaling Unit consists of a tone generator and receiver designed to operate over wire lines, telephone power line carrier, and radio or microwave communications circuits for signaling, dialing, slow speed telemetering, supervisory controls or other information. Transmitters and receivers are available for 36 frequency channels between 2000 and 6475 cps. This equipment is being used by military and governmental agencies, pipeline and power companies, railroads and other groups requiring remote on-off switching, continuous indication of operating conditions, and automatic detection of wire line or power source failures along their systems.



PROTECTION THROUGH SUPERVISORY CONTROL

The Hammarlund "Multi-Gate" Remote Supervisory and Control System is engineered to provide highly efficient, fully reliable operational controls of important remote equipment such as used by refineries, pipeline utilities, railroads, civil defense and other commercial, as well as military, groups. Because of a unique design by which a single tone activates a receiver, which in turn will then accept a second tone to operate a relay, this equipment can be used where disturbances on connecting wire or radio circuits make ordinary tone-operated remote controls impractical. Up to 21 individual on-off functions can be handled over a single circuit employing only 7 audio signaling tones.



SELECTIVE CALLING OR SIGNALING

Hammarlund Selective Calling equipment, added to 2-way radio system used to control large fleets of vehicles, or distant fixed stations, adds privacy, speed, safety, quietness and convenience to day-in-day-out operations. By the push of a button the dispatcher within 0.8 of a second selects the station which he wants to contact. Only the selected operator or group of operators can receive the call. If the operator of the car or station being called doesn't answer, an indicator lamp remains lighted to show he was called. This simple equipment can be added to any present installation, or incorporated in any type of installation now projected.

THE HAMMARLUND MANUFACTURING CO., INC.



COMMUNICATION RECEIVERS

The New "HQ-140-X"

"HQ-140-X" is a new superheterodyne type receiver that provides amateurs and other short wave listeners with all the advantages of modern professional design and circuitry. In addition, it incorporates the outstanding features that have made Hammarlund "HQ's" famous for quality and performance. This receiver retains the high degree of sensitivity and selectivity of the "HQ-129-X," and in addition features notably improved frequency stability and image ratio. It covers a continuous range of frequencies from 540 kc to 31 mc, or 155 meters to 9.7 meters, in six bands.

Wide spread tuning is supplied on the four higher frequency bands, and actual calibration in the 80, 40, 20, 15, and 10 meter amateur bands. Many types of noise and other interference have been substan-

tially reduced by the outstanding noise limiter and the special Hammarlund patented crystal filter.



FEATURES

TUNING RANGES: .54—1.32 mc, 1.32—3.2 mc, 3.2—5.7 mc, 5.7—10 mc, 10—18 mc, and 18—31 mc.

CALIBRATED BAND SPREAD: 3.5—4 mc, 7—7.3 mc, 14—14.4 mc, 20.9—21.6 mc, and 28—30 mc.

TUBE LINE-UP: 6C4 Oscillator, 6BA6 RF Amplifier, 6BE6 Mixer, 6BA6 1st IF Amplifier, 6BA6 2nd IF Amplifier, 6BA6 3rd IF Amplifier, 6AL5 combination detector, AVC and noise limiter, 12AU7 1st AF Amplifier and BFO, 6V6GT/G Audio Power Output, OC3/YR105 Voltage Regulator and 5U4G Full Wave Rectifier.



The "SP-600-JX"

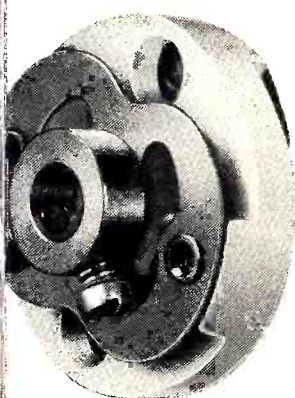
The "SP-600-JX" communications receiver, now also available to hams, is a masterpiece of receiver design and already is world-known for its outstanding construction and performance.

This professional receiver, with its six bands covering the frequency spectrum from 540 kc to 54 mc, is being used in large quantities by military and governmental agencies, as well as by commercial agencies, for both single and diversity reception.

This magnificent receiver is a 20 tube dual conversion superheterodyne. The power supply is an integral part of the receiver chassis. Operation on any of six crystal controlled fixed frequency channels within the range of the receiver is immediately available. This designates it as the perfect receiver for point-to-point and network operations. Pre-arranged day and night fixed frequencies. With crystal control you can select your desired channels immediately.

Stability is .001 to .01 percent depending on frequency to which receiver is tuned, image rejection is 80 db to 120 db down, and spurious responses are at least 100 db down. Sensitivity is 1 microvolt CW and 2 microvolts AM while selectivity for the three calibrated crystal and three non-crystal ranges is from 200 cycles to 13 kc. Radiation is negligible with no cross-talk in multi-receiver installations.

"FC" and "FNC" COUPLINGS



FEATURES—The "FC-46-S" is an insulated flexible coupling designed to provide for mechanical ganging of shafts even though angularly misaligned. The smallest dimensions have been incorporated consistent with the rugged construction necessary for general service. A high degree of electrical isolation is achieved through the use of silicone treated steatite insulation. Flashover voltage is approximately 5000 V. R.M.S. Brass hubs and spring temper phosphor bronze flexible arms are nickel plated. An exclusive and important feature of this coupling is its characteristic of uniform

force-thrust through 360° of rotation. This eliminates tendency to vibrate at high speeds, minimizes bearing wear and assures accurate tracking.

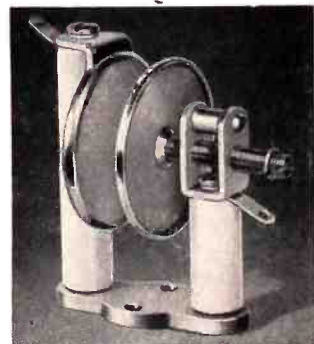
The "FNC-46-S" is a non-insulated coupling for use where electrical continuity between shafts is required. The flexible arms are held securely to a nickel plated brass ring instead of an insulator.

STANDARD STOCK TYPES

CODE FC-46-S	Insulated flexible coupling
CODE FNC-46-S	Non-insulated flexible coupling

"NZ-10" CAPACITORS

FEATURES—The "NZ-10" is a compact transmitter neutralizing capacitor designed for easy and accurate adjustment. The rotor is attached to a fine-

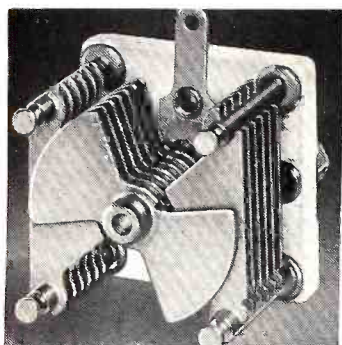


thread lead screw which may be adjusted with smooth and precise action by a screwdriver and locked securely by a readily accessible clamping screw. A stop prevents shorting of plates at maximum capacity. Long leakage paths to ground from both rotor and stator are provided. Glazed steatite insulators and smoothly rounded aluminum plates minimize flashover.

SPECIFICATIONS—Capacity is adjustable from 2.3 to 10 mmf. Peak voltage rating is 3000 V. at maximum capacity (minimum gap) position.



HAMMARLUND



"BFC" CAPACITORS

FEATURES—The "BFC" "butterfly" type capacitor has very low minimum capacity, low inductance and isolated rotor for use in VHF applications as a series capacitor with no rotor contact. Mechanical and electrical symmetry and stator terminal locations minimize circuit inductance.

CONSTRUCTION—Brass rotors and stators are soldered and nickel-plated. The contact wiper is heavily silver-plated beryllium-copper. Tapped studs on the silicone

treated steatite front panel permit mounting the capacitor without grounding the rotor. The sleeve type bearing is nickel-plated brass.

SPECIFICATIONS—Straight line capacity, 90° rotation from minimum to maximum capacity position. Air gap is 0.030" nominal. Tested at 1200 V. R.M.S., 60 cycles between rotor and each stator. *High Speed Ball-Bearing Models Also Are Available.*

CODE	CAPACITY/SECTION		SERIES CAPACITY		PLATES	
	Max.	Min.	Max.	Min.	Rotor	Ea. Stator
BFC-12	14.5	3.4	7.6	2.2	4	3
BFC-25	27.3	4.8	14.1	2.9	7	6
BFC-38	40.1	6.2	20.6	3.6	10	9

"MAC" CAPACITORS

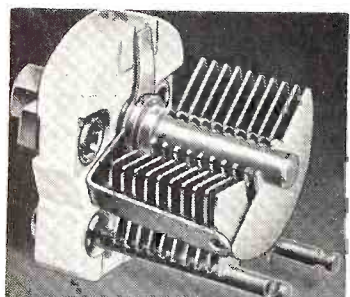
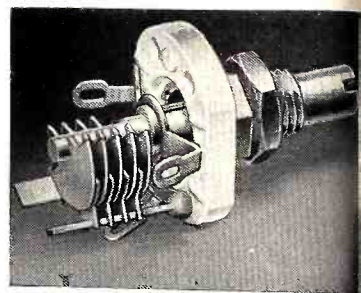
FEATURES—The "MAC" provides the low minimum capacity essential for use as a trimmer in the VHF range. It was engineered to achieve the smallest dimensions practical to meet the requirements of a miniaturized component.

CONSTRUCTION—Its silicone treated steatite base is only 3/4" x 5/8". Rotor and stator are

soldered assemblies and are of brass, silver-plated. Rotor and stator terminals are positioned to permit short leads. The threaded bearing is provided with flat sides to permit single hole mounting.

SPECIFICATIONS—Straight line capacity. Screw-driver adjustment. Air gap is 0.017" nominal. Tested at 750 V. R.M.S., 60 cycles.

CODE	CAPACITY		PLATES	CODE	CAPACITY		PLATES
	Max.	Min.			Max.	Min.	
MAC-5	5.0	1.4	5	MAC-15	14.2	2.2	15
MAC-10	8.7	1.7	9	MAC-20	19.6	2.7	21



"APC" CAPACITORS

FEATURES—The "APC" trimmer capacitor originated by Hammarlund over twenty years ago is still widely recognized as the standard capacitor of its type. Its use is indicated in all classes of equipment where a compact, high quality air dielectric trimmer is required. It was designed to resist effects of temperature, moisture and vibration. Silicone treated steatite insulation is used to insure high leakage resistance.

CONSTRUCTION—Brass rotor and stator are soldered to brass supports. Nickel-plated phosphor

bronze wiper assures positive rotor contact. All metal parts are nickel-plated. Terminals are hot-tin dipped. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding the rotor.

CODE	CAPACITY		PLATES
	Max.	Min.	
APC-25	25.	3.0	7
APC-50	50.	3.9	14
APC-75	75.	4.6	20
APC-100	100.	5.5	27
APC-140	140.	6.7	37

SPECIFICATIONS—Straight line capacity characteristic. Hexagonal collar on slotted shaft permits rotor adjustments. Air Gap is 0.015" nominal. Tested at 600 V. R.M.S., 60 cycles.

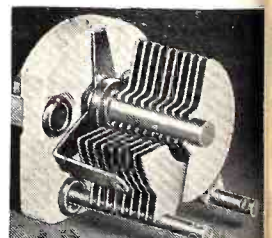
"MAPC" CAPACITORS

FEATURES—The "MAPC" capacitor is representative of Hammarlund's efforts to meet the demand for smaller dependable components. It is a scaled-down version of the popular "APC" with everything reduced except the quality and performance characteristics. For example, an "MAPC" is about half the size and weight of an "APC." Lower minimum capacities and low inductance make the "MAPC" suitable for VHF use.

CONSTRUCTION—The standard "APC" construction is used in this capacitor. Rotors and stators are fabricated by soldering brass plates to supporting members and nickel-plating the assemblies. Nickel-plated phosphor bronze wiper assures positive rotor contact. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding rotor.

CODE	CAPACITY		PLATES
	Max.	Min.	
MAPC-15	15.	2.3	6
MAPC-25	25.	2.6	10
MAPC-35	35.	2.9	14
MAPC-50	50.	3.2	19
MAPC-75	75.	3.9	29
MAPC-100	100.	4.5	38

SPECIFICATIONS—Straight line capacity. Screw-driver or socket wrench adjustment. Air gap is 0.0135" nominal. Tested at 600 V. R.M.S., 60 cycles.

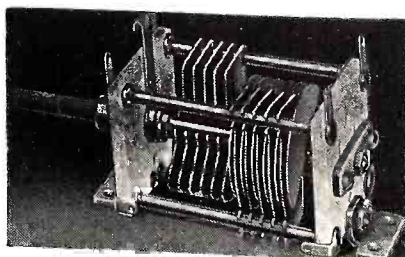
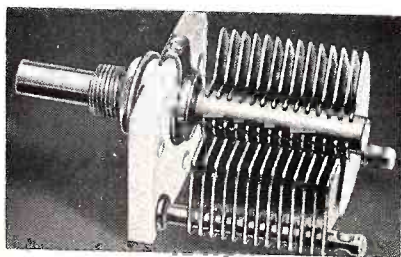


"HFA" and "HFB" CAPACITORS

SINGLE SECTION CAPACITOR—The "HFA" is a single section tuning capacitor similar to "HF" except that larger plates permit wider air-gaps for the same capacitance values. Resultant higher break-down ratings extend the use of the capacitor into the high frequency low-power transmitter field. A threaded sleeve bearing permits single hole mounting and the bracket supplied may be used for base mounting. A lug type terminal soldered to the bearing provides an efficient rotor connection.

DOUBLE SECTION CAPACITOR—The "HFB" is a dual, balanced rotor

transmitting capacitor employing front and rear panels plus a ball-thrust rear bearing, but otherwise incorporating constructional features identical to the smaller "HFA." An insulated shaft extension safeguards operating personnel from the high voltages which may be applied to the rotor. The small size, rugged construction, balanced rotor and range of capacitance values and breakdown voltages make this capacitor ideally suited to many applications.



SPECIFICATIONS—Straight line capacity. Air gaps and test voltages are as indicated in table. However, "HFB" breakdown voltages are doubled and capacitance values approximately halved when stator sections are connected in series.

CODE	CAPACITY		SPACING	PLATES/SECTION
	Max.	Min.		
HFA-100-A	102.	4.5	0.020	19
HFA-140-A	145.	6.0	0.020	27
HFA-10-B	9.	2.3	0.030	3
HFA-15-B	16.	2.8	0.030	5
HFA-25-B	25.	3.0	0.030	7
HFA-50-B	50.	4.3	0.030	14
HFA-100-B†	100.	7.5	0.030	27
HFA-15-E	16.	4.0	0.070	9
HFB-50-C	50.	9.0	0.050	11
HFB-100-C	105.	14.0	0.050	23
HFB-35E*	37.	9.5	0.070	11
HFB-65E*	63.	12.5	0.070	19

60 Cycle Test Voltage:
 "HFA"—"A" 800 V. R.M.S., "B" 1200 V. R.M.S.
 "E" 1750 V. R.M.S., "HFB"—"C" 1500 V. R.M.S.
 "E*" 3000 V. R.M.S.; plates have rounded edges.
 †Has front and rear supporting panels.



"RMC" CAPACITORS

FEATURES—The "RMC" was designed specifically for applications requiring an "MC" type tuning capacitor with very rigid construction. Its

sturdy frame consists of heavy gauge aluminum end panels held together by three aluminum tie rods. It has a brass sleeve front bearing and a single ball thrust rear bearing for smooth tuning and a high degree of resetability. The rotor contact is a forked silver-plated beryllium-copper spring wiping against a wide disc on the rotor.

SPECIFICATIONS—Straight line capacity. Air gap is 0.0245" nominal.

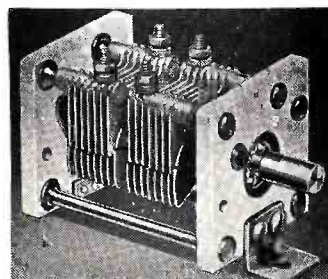
CODE	CAPACITY		PLATES
	Max.	Min.	
RMC-50-S	50.	7.3	7
RMC-100-S	105.	9.5	14
RMC-140-S	143.5	11.0	19
RMC-325-S	327.	17.5	43

"VU" CAPACITORS

FEATURES—A uniquely designed UHF tuning capacitor using completely new concepts. With it, conventional "lumped constant" circuits, rather than tuned cavity techniques, can be efficiently used up to 500 Mc. Capacitor sections are in series to eliminate rotor wiper and the rotor. It utilizes Pyrex balls to form precision bearings and to completely eliminate the rotor. Thus, noise generated by rubbing metal-to-metal contact and variable resistance paths in the bearings have been totally eliminated. Circuit connections are made to threaded studs on each end. This permits vacuum tube and inductor to be mounted adjacent to each other on opposite sides of the capacitor to minimize circuit inductance.

CODE	SERIES CAPACITY		PLATES/SECTION
	Eff.	Min.	
VU-20	22.5	3.35	11
VU-30	31.5	3.5	15
VU-45	45.0	3.8	21

SPECIFICATIONS—The capacity characteristic approaches a straight line frequency curve. Air gap is .0168" nominal. Tested at 700 V. R.M.S., 60 cycles, between rotor and each stator.



"MC" and "MCD" CAPACITORS

FEATURES—The "MC" is a versatile single section tuning capacitor designed to give a choice of mounting, connections and capacity characteristics. "MC-S" capacitors have a straight line capacity characteristic. "MC-M" units have offset plates resulting in a "Midline" characteristic which more equally spaces frequencies. "MC-X" units are wide-spaced for high voltages. The

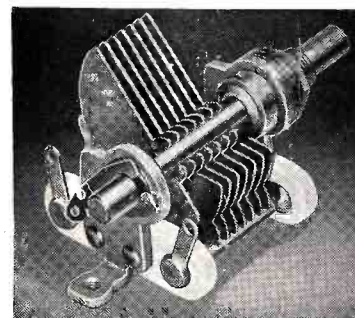
"MCD" is a split-stator panel-mounted capacitor.

SPECIFICATIONS—Straight line or "midline" capacity characteristic. Single-spaced types have 0.0245" nominal air gap and are tested at 1000 V. R.M.S., 60 cycles. Wide-spaced ("X") types have 0.0715" nominal air gap and are tested at 1750 V. R.M.S., 60 cycles.

CODE	CAPACITY		PLATES/SECTION	CODE	CAPACITY		PLATES/SECTION
	Max.	Min.			Max.	Min.	
MC-20-S	20.	5.5	3	MC-20-SX	20.	6.8	7
MC-35-S	35.	6.0	5	MC-35-MX	32.	7.8	11
MC-50-M	50.	6.3	7	MC-35-SX	32.	8.5	11
MC-50-S	50.	6.5	7	MC-50-MX	53.	10.5	19
MC-75-M	80.	7.3	11	MC-50-SX	53.	11.5	19
MC-75-S	80.	8.0	11	MC-100-SX	100.	16.5	35
MC-100-M	100.	7.7	14	MCD-50-M	50.	5.5	7
MC-100-S	100.	8.3	14	MCD-100-M	100.	6.3	14
MC-140-M	140.	9.0	19	MCD-100-S	100.	7.0	14
MC-140-S	140.	10.0	19	MCD-140-M	140.	7.8	19
MC-200-M	200.	10.3	27	MCD-35-MX	31.	6.0	11
MC-250-M	250.	12.0	34	MCD-35-SX	31.	6.8	11
MC-325-M	320.	13.5	43				

M—Midline plates
X—Wide-Spaced

S—Straightline plates



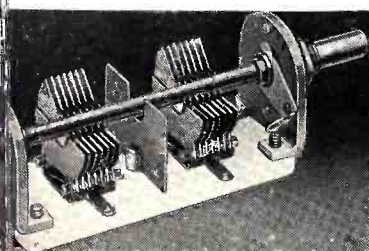
"HF" and "HFD" CAPACITORS

SINGLE SECTION CAPACITOR—The "HF" single section tuning capacitor employs

"HFD" dual capacitor, like the "HF" singles, incorporate advanced features providing for maximum efficiency at high frequency. Aluminum front and rear end panels are mounted on a heavy silicone treated steatite base. Wide front and rear bearings with individual silver-plated beryllium-copper wipers for each

section assure long life and maximum contact efficiency. Single hole panel mount or base mounting.

SPECIFICATIONS—Straight line capacity. Single spaced types (HF and HFD) have 0.015" air gap and are tested at 600 V. R.M.S., 60 cycles. Wide spaced types (HF-X and HFD-X) have 0.045" air gap and are tested at 1400 V. R.M.S., 60 cycles.



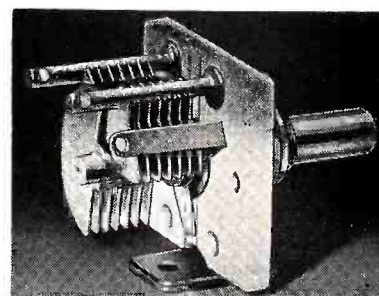
"APC" rotor and stator design. Extra long bearing and positive contact nickel-plated phosphor-bronze wiper make this unit ideally suited to high frequency applications. Silicone treated steatite insulation. Single hole panel or base mounting.

SINGLE SECTION CAPACITOR — The

CODE	CAPACITY		PLATES/SECTION
	Max.	Min.	
HF-15	17.5	2.8	5
HF-35	36.	3.2	10
HF-50	52.	3.7	14
HF-100	102.	5.3	27
HF-140	142.	6.3	37
HF-15-X	15.	3.6	10
HF-30-X	30.	5.2	20
HFD-50	52.	3.6	14
HFD-100	102.	5.0	27
HFD-140	142.	6.0	37
HFD-15-X	16.	3.8	11
HFD-30-X	28.5	5.0	19

D—Split stator

X—Wide-Spaced



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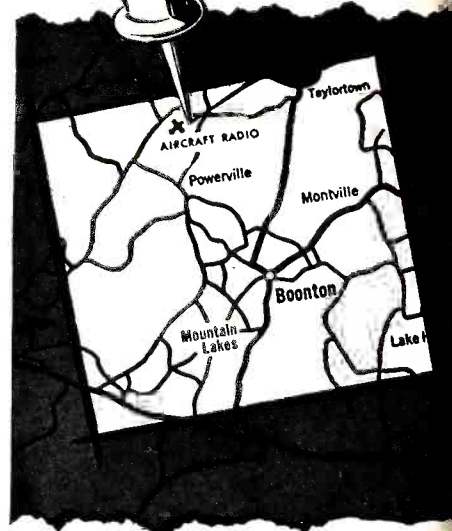
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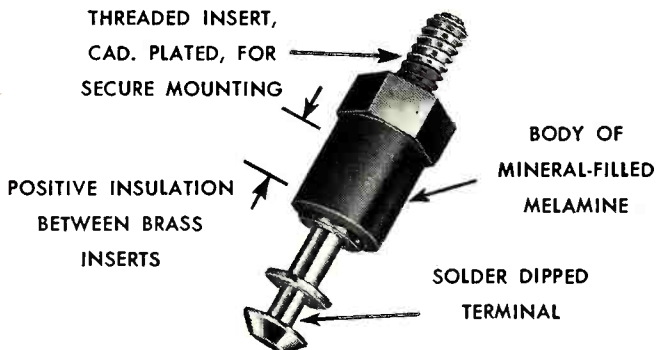
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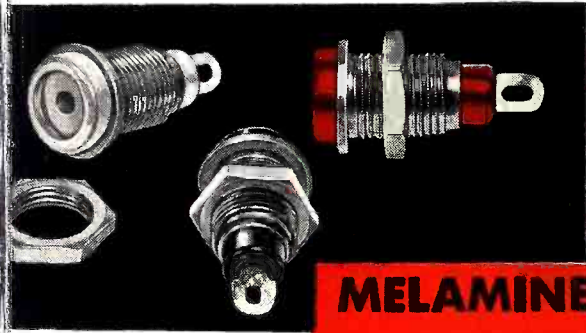
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T 103A-2



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BRADLEY RECTIFIERS AND PHOTOCELLS

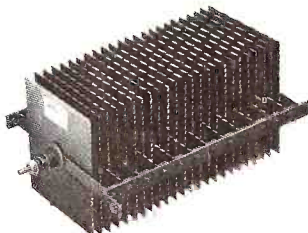
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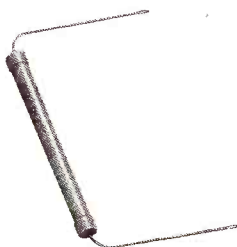
- Bradley's exclusive vacuum process assures dependability and long life.

POWER RECTIFIERS

(SE11 Series) Power Rectifiers, Ratings from 50 milliamperes to thousands of amperes. Available in half-wave, full-wave bridge, voltage multiplier, center tap full-wave, polyphase and special connections to customer's requirements. Supplied with, or without brackets. Full wave ratings per plate convection cooled:



- Type R Plate size 1" x 1" to .2 amperes.
- Type S Plate size 1 $\frac{3}{16}$ " x 1 $\frac{3}{16}$ " to .3 amperes.
- Type T Plate size 1 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " to .6 amperes.
- Type U Plate size 2" x 2" to 1.2 amperes.
- Type V Plate size 3" x 3" to 3.0 amperes.
- Type W Plate size 4" x 4" to 6 amperes.
- Type X Plate size 5" x 6" to 12 amperes.



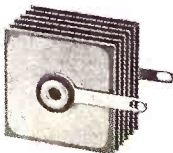
MINIATURE HIGH VOLTAGE RECTIFIERS (SE8 Series) Completely sealed in phenolic housings, or (SE6) hermetically sealed in glass tubes. Ratings up to 6000 volts peak inverse and 12.5 ma D.C. per unit. Units in series for higher voltage. Sizes from $\frac{1}{4}$ " diameter to $\frac{3}{8}$ " diameter.

VALVES (SR Series) For magnetic amplifier and special applications. Hermetically sealed to meet all specifications.



RADIO-TV RECTIFIERS

(RS Series) Rated from 50 ma to 500 ma D.C. output. Peak inverse up to 500 volts. Plate size from 1" x 1". Length $\frac{1}{2}$ " to 1 $\frac{1}{2}$ ".



COPPER OXIDE

- Vacuum processing and gold contacts assure minimum aging, minimum temperature error.

HIGH CONVERSION RATIO RECTIFIERS

(CX4D Series) for electric control and instrument work. Ratings to 100 ma D.C. output and up to 12 volts A.C. Completely enclosed housing. Size $\frac{7}{8}$ " x $\frac{3}{4}$ ", from $\frac{1}{2}$ " to 2" long. Single 6-32 screw mounting.



MINIATURE HERMETICALLY SEALED RECTIFIERS (CX23 Series)

Modulators and bridges with matched sections for detecting phase differentials in A.C. currents and small D.C. potentials applied to balanced A.C. circuits. Maximum 2 volts continuous as modulators, 6 volts as bridges.



INSTRUMENT RECTIFIERS

(CX2E Series) Rated up to 6 volts A.C., 4.5 volts D.C., 5 ma D.C. for conventional circuits and special current control applications. Two $\frac{7}{64}$ " diameter mounting holes. 3" gold leads.



MODULATORS AND VARISTORS

(CX3E Series) with current and temperature characteristics balanced to better than 1% over a range of -40°C. to 70°C. Up to 12 volts A.C., 8 volts D.C., 5 ma D.C. Hermetically sealed.



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For low current diode requirements. Excellent stability over a broad range of temperatures. Rugged and conservatively rated to provide a wide margin of sustained operating dependability under overload conditions of moderate severity.



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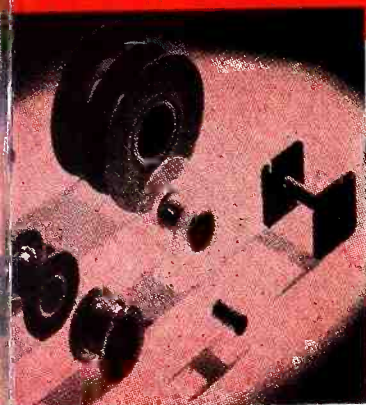
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STONE'S SPIRAL ELECTRICAL TUBES

Made of dielectric krafts, fish paper, asbestos, plastic films—As small as .046" ID and lengths as short as .040"—Wall thicknesses .002" to .125" depending upon materials and ID—More than 200 types and thicknesses of materials enable Stone to develop and produce special items to meet the requirements of the electronics and electrical industries. These include tubes with various end closures, notches, punchings, printing and stampings—To meet lower moisture absorbent requirements, government or underwriters' specifications, we dip or impregnate in paraffin, high melt waxes, thermo-setting and thermo-plastic resins.

STONIZED SPIRAL PHENOLIC TUBES

These paper-base phenolic tubes have high dielectric strength, low moisture absorption, and good dimensional stability—Can be furnished in various grades to meet specific requirements having inside diameters as low as 1/16", various wall thicknesses and lengths—Available with special formed ends, punched, notched, slotted, and printed.

Our controlled manufacturing process enables us to furnish these tubes to accurate specifications at low cost.



Stone's specialty is small diameter spiral wound insulating tubing from 3/64" to 1" ID, although larger sizes are available. Stone tubes are custom-made and close tolerances naturally result. Yet these custom-made tubes are mass produced, which means low cost to many hundreds of America's leading manufacturers.

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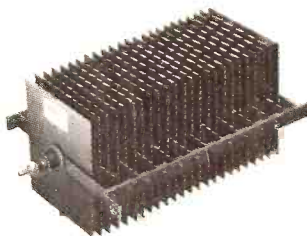
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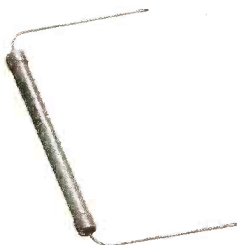
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- Type X Plate size 5" x 6" to 12 amperes.

MINIATURE HIGH VOLTAGE RECTIFIERS

(SEB Series) Completely sealed in phenolic housings, or (SE6) hermetically sealed in glass tubes. Ratings up to 6000 volts peak inverse and 12.5 ma D.C. per unit. Units in series for higher voltage. Sizes from $\frac{1}{4}$ " diameter to $\frac{5}{8}$ " diameter.

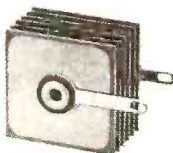


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RADIO-TV RECTIFIERS

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COPPER OXIDE

• Vacuum processing and gold contacts assure minimum aging, minimum temperature error.

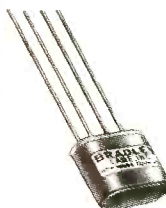
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(CX4D Series) for electric control and instrument work. Ratings to 100 ma D.C. output and up to 12 volts A.C. Completely enclosed housing. Size $\frac{7}{8}$ " x $\frac{3}{4}$ ", from $\frac{1}{2}$ " to 2" long. Single 6-32 screw mounting.



MINIATURE HERMETICALLY SEALED RECTIFIERS (CX23 Series)

Modulators and bridges with matched sections for detecting phase differentials in A.C. currents and small D.C. potentials applied to balanced A.C. circuits. Maximum 2 volts continuous as modulators, 6 volts as bridges.



INSTRUMENT RECTIFIERS

(CX2E Series) Rated up to 6 volts A.C., 4.5 volts D.C., 5 ma D.C. for conventional circuits and special current control applications. Two $\frac{7}{64}$ " diameter mounting holes. 3" gold leads.



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For low current diode requirements. Excellent stability over a broad range of temperatures. Rugged and conservatively rated to provide a wide margin of sustained operating dependability under overload conditions of moderate severity.



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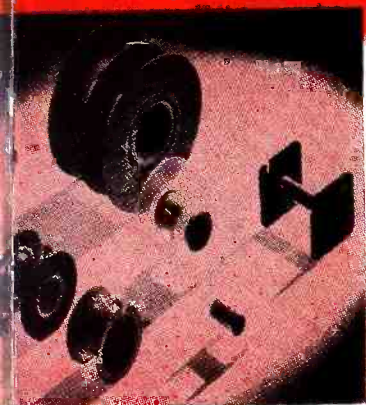
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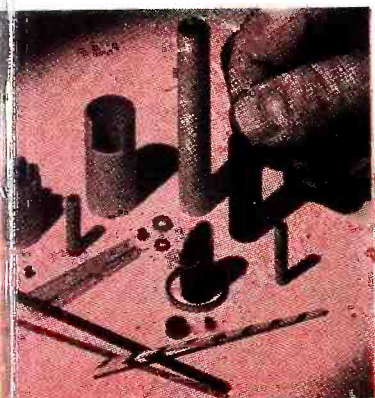
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STONIZED SPIRAL PHENOLIC TUBES

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Our controlled manufacturing process enables us to furnish these tubes to accurate specifications at low cost.

Stone's specialty is small diameter spiral wound insulating tubing from 3/64" to 1" ID, although larger sizes are available. Stone tubes are custom-made and close tolerances naturally result. Yet these custom-made tubes are mass produced, which means low cost to many hundreds of America's leading manufacturers.

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Incorporated
• **STONIZED PRODUCTS COMPANY, INC.**

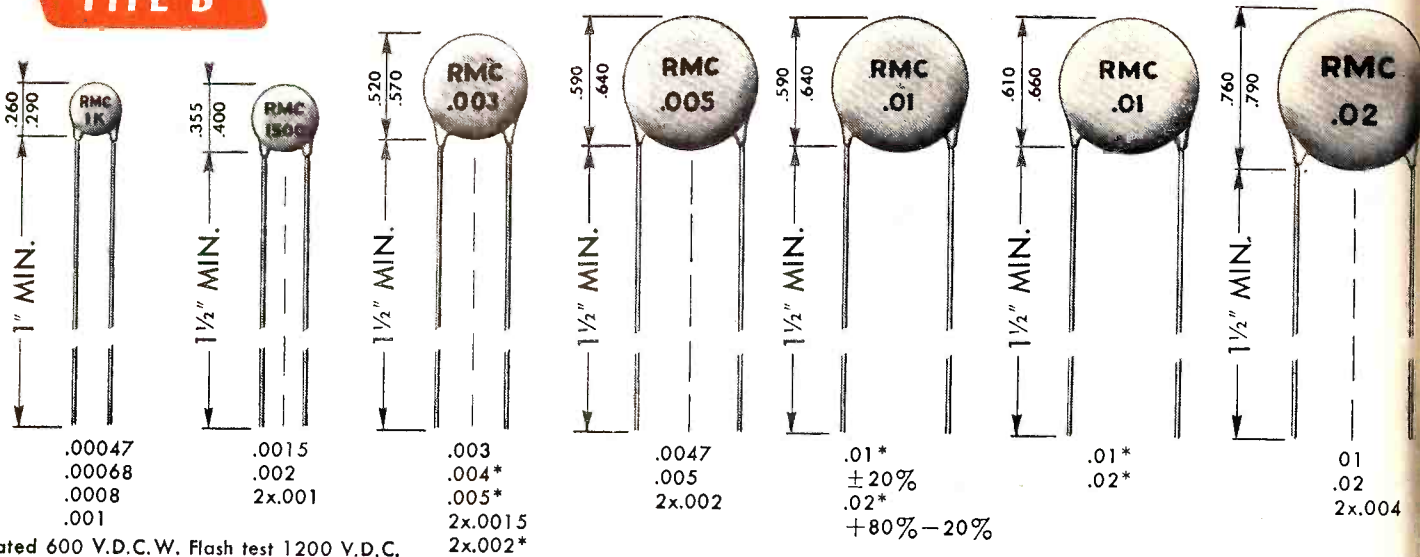
900-922 Franklin St., N. E., Washington 17, D. C.

RMC DISCAPS

APPROVED AND USED BY LEADING MANUFACTURERS

"Heavy Duty" By-Pass DISCAPS

TYPE B



*Rated 600 V.D.C.W. Flash test 1200 V.D.C.

SPECIFICATIONS

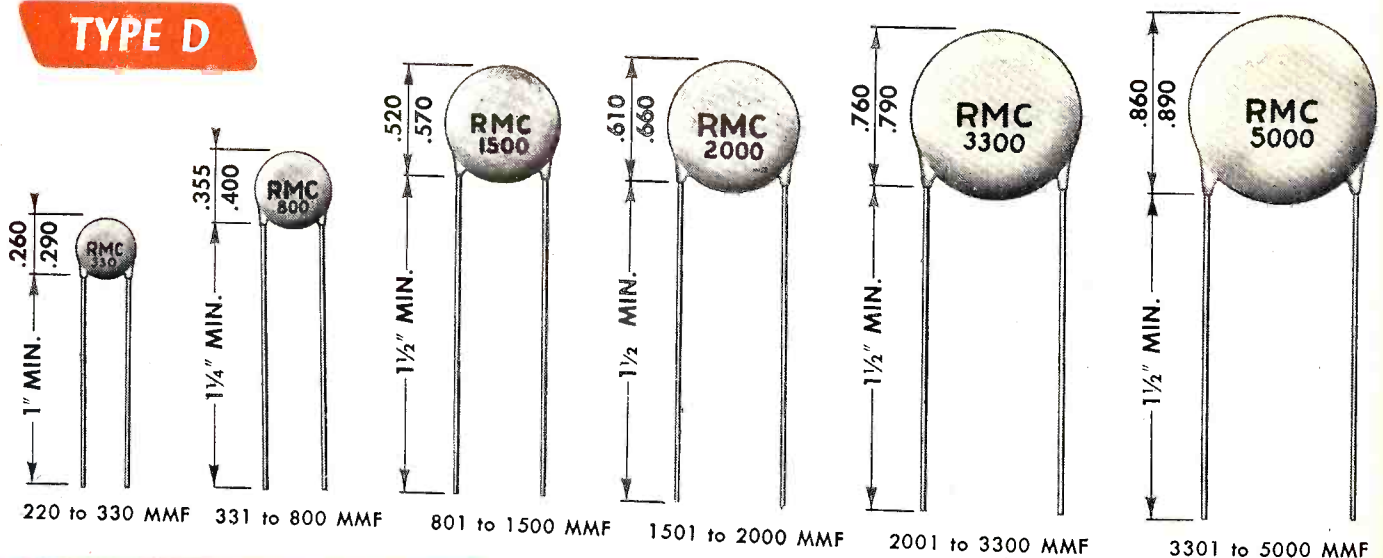
TYPE B BY-PASS SERIES—GUARANTEED MINIMUM VALUE

POWER FACTOR: 1.5% Max. @ 1 KC (initial)
 POWER FACTOR: 2.5% Max. @ 1 KC (after humidity)
 WORKING VOLTAGE: 1000 V.D.C.
 TEST VOLTAGE (FLASH): 2000 V.D.C.
 LEADS: No. 22 tinned copper (.026 dia.)

INSULATION: Durez phenolic—vacuum waxed
 INITIAL LEAKAGE RESISTANCE: Guaranteed higher than 7500 megohms
 AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohms

"Stable Capacity" DISCAPS

TYPE D



SPECIFICATIONS

POWER FACTOR: 1% Max. @ 1 K C (initial)
 POWER FACTOR: 2.5% Max @ 1 K C, after humidity
 WORKING VOLTAGE: 1000 V.D.C.
 TEST VOLTAGE (FLASH): 2000 V.D.C.
 LEADS: No. 22 tinned copper (.026 dia.)

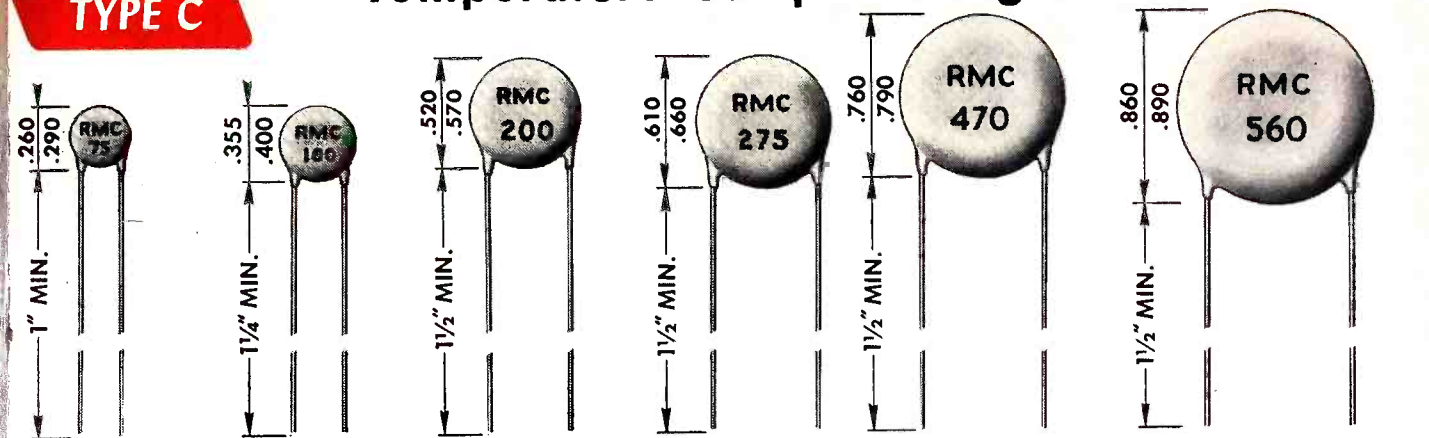
INSULATION: Durez phenolic—vacuum waxed
 INITIAL LEAKAGE RESISTANCE: Guaranteed higher than 7500 megohms
 AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohms

CAPACITY TOLERANCE: ±20% at 25° C or G.M.V.

... the **MONEY-SAVING** Replacement for Mica and Tubular Ceramic **CONDENSERS!**

TYPE C

Temperature Compensating DISCAPS



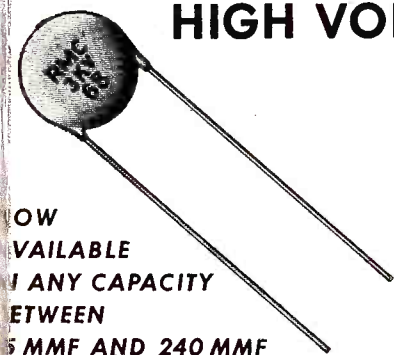
	1/4 Dia.	5/16 Dia.	1/2 Dia.	5/8 Dia.	3/4 Dia.	7/8 Dia.
	1- 3 MMF	4- 9 MMF	10- 30 MMF	—	—	—
33	2- 12	13- 27	28- 60	61- 75 MMF	76-100 MMF	101-150 MMF
30	2- 15	16- 27	28- 60	61- 75	76-120	121-150
50	2- 15	16- 27	28- 60	61- 75	76-140	141-150
20	3- 15	16- 30	31- 60	76-100	101-150	151-190
30	3- 15	16- 30	31- 75	76-100	101-150	151-190
70	3- 20	21- 40	41- 80	80-120	121-200	201-240
50	5- 25	26- 56	57-150	151-200	201-280	281-350
00	15- 50	51-100	101-200	200-250	251-330	331-560
00	47- 75	76-120	121-200	201-275	276-470	471-560

SPECIFICATIONS

POWER FACTOR: Less than .1% at 1 megacycle
 WORKING VOLTAGE: 1000 V.D.C.
 TEST VOLTAGE (FLASH): 2000 V.D.C.
 CODING: Capacity, tolerance and TC stamped on disc
 INSULATION: Durez phenolic-vacuum waxed

INITIAL LEAKAGE RESISTANCE: Guaranteed higher than 7500 megohms
 AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohms
 LEADS: #22 tinned copper (.026 dia.)
 TOLERANCES: $\pm 5\%$ $\pm 10\%$ $\pm 20\%$

HIGH VOLTAGE DISCAPS—Designed for Deflection Yokes



LOW
 AVAILABLE
 IN ANY CAPACITY
 BETWEEN
 5 MMF AND 240 MMF

SPECIFICATIONS

POWER FACTOR: .1% Max. @ 1 M C (initial)
 POWER FACTOR: 2.5% Max. @ 1 M C, after humidity
 WORKING VOLTAGE: 2000, 3000, 4000, 5000 V.D.C.
 TEST VOLTAGE: 4000, 6000, 8000, 10,000 V.D.C.

LEADS: No. 22 tinned copper (.026 dia.)
 INSULATION: Durez phenolic—vacuum waxed
 INITIAL RESISTANCE: Guaranteed higher than 7500 megohms
 AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohms
 AVAILABLE TOLERANCE: $\pm 5\%$ $\pm 10\%$ $\pm 20\%$

SEND FOR SAMPLES AND TECHNICAL DATA

DISCAP
 CERAMIC
 CONDENSERS



RADIO MATERIALS CORPORATION

GENERAL OFFICE: 3325 N. California Ave., Chicago 18, Ill.

FACTORIES AT CHICAGO, ILL. AND ATTICA, IND.

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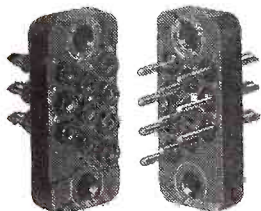
Winchester Electronics Incorporated

ELECTRICAL CIRCUIT CONNECTORS

..can solve your toughest weight and space problems!

Our Engineering and Development Department can help you with your requirements for special connectors.

SERIES "A"



1/2 ACTUAL SIZE

DESCRIPTION

LIGHTWEIGHT AIRCRAFT TYPE

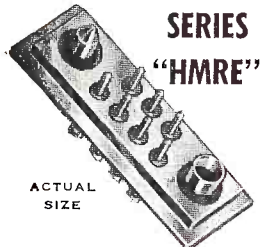
Polarized; Rack, Panel or Cable mounted—with Hood or Clamp and Cable strain relief.

Types Available

Receptacle	Plug
A7S	A7P
A10S	A10P
A15S	A15P
A18S	A18P

(Figures in above Code Nos. indicate number of contacts.)

SERIES "HMRE"



ACTUAL SIZE

HERMETIC PLUG

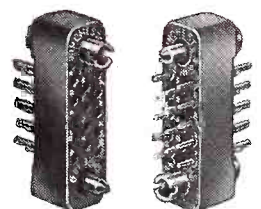
Each special contact fused in glass into special base plate provided for soldering into a rectangular hole in an hermetically sealed housing or bulkhead. Used with Standard "MRE" Receptacle.

Plug

HMRE7P-G
HMRE9P-G
HMRE14P-G
HMRE18P-G
HMRE20P-G
HMRE21P-G
HMRE26P-G
HMRE34P-G
HMRE41P-G
HMRE50P-G

(Used with Standard MRE Receptacles)

SERIES "SMRE"



ACTUAL SIZE

SUB-MINIATURE

For Aircraft, Instruments and Portable Equipment

Light weight, Polarized. Self-aligning with special guide pins. Rack, Panel or Cable mounted with Hood and Cable strain relief.

Receptacle	Plug
SMRE7S-G	SMRE7P-G
SMRE14S-G	SMRE14P-G
SMRE20S-G	SMRE20P-G
SMRE26S-G	SMRE26P-G
SMRE29S-G	SMRE29P-G
SMRE34S-G	SMRE34P-G

(Other sizes to meet your requirements)

SERIES "CR"



1/2 ACTUAL SIZE

MINIATURE PRESSURE-TIGHT

This connector is typical of several recent designs requiring a miniature connector (1/2" dia. x 1 1/4" lgth.) in an aluminum die-cast shell. It is sealed with neoprene gaskets around the inserts and around each contact for pressure-tight construction.

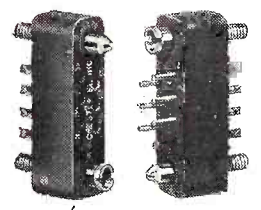
Receptacle (Panel)	Plug (Cable)
CRS-2S	CRS-2P

(Standard type, pin contacts in plug)

Receptacle	Plug
CRS-2P-R	CRS-2S-R

(Reversed type, pin contacts in receptacle)
(5 contacts #20 AWG)
(2 contacts #18 AWG)

SERIES "MRE"



2/3 ACTUAL SIZE

MINIATURE

For Aircraft, Instruments and Portable Equipment

Light weight, Polarized. Self-aligning with special guide pins. Rack, Panel or Cable mounted with Hood and Cable strain relief.

Receptacle	Plug
MRE7S-G	MRE7P-G
MRE8S-G	MRE8P-G
MRE9S-G	MRE9P-G
MRE12-2S-G	MRE12-2P-G
MRE14S-G	MRE14P-G
MRE18S-G	MRE18P-G
MRE20S-G	MRE20P-G
MRE21S-G	MRE21P-G
MRE26S-G	MRE26P-G
MRE34S-G	MRE34P-G
MRE41S-G	MRE41P-G
MRE50S-G	MRE50P-G
MRE75S-G	MRE75P-G

SERIES "B"



2/3 ACTUAL SIZE

DESCRIPTION

MINIATURE INSERT IN SPECIAL SHELL

Aluminum die-cast shells available in 3/8" and 1-7/32" dia. with bayonet locking for quick engage and disengage. Shells have synthetic rubber gaskets. Flanges permit mounting of receptacle in panel or housing and special gland construction provides cable entry in plug.

Types Available

Receptacle (Panel)	Plug (Cable)
B12S	B12P
B14S	B14P
B24S	B24P

(Standard type, pin contacts in plug.)

B12P-R	B12S-R
B14P-R	B14S-R
B24P-R	B24S-R

(Reversed type, pin contacts in receptacle.)
(Figures in above Code Nos. indicate number of contacts.)

SERIES "SA"



2/3 ACTUAL SIZE

LIGHTWEIGHT AIRCRAFT SMALL

Polarized; Rack, Panel or Cable mounted—with Hood or Clamp and Cable strain relief

Types Available

Receptacle	Plug
SA7S	SA7P
SA10S	SA10P
SA15S	SA15P
SA18S	SA18P

(Figures in above Code Nos. indicate number of contacts.)

SERIES "HM"



ACTUAL SIZE

HERMETIC PLUG (Round Hole)

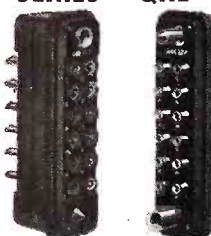
Special contacts fused in glass into special base plate provided for soldering into a round hole in an hermetically sealed housing or bulkhead. Used with Standard "M" Receptacle.

Plug

HM4P
HM5P

(Used with Standard M4S, M5S or M7S Receptacles)

SERIES "QRE"



2/5 ACTUAL SIZE

QUICK-DISCONNECTING SELF-ALIGNING

Spring-loaded contacts for ease in separation. Self-aligning with special guide pins. Rack, Panel or Cable mounted with Hood and Cable strain relief.

Types Available

Receptacle	Plug
QRE6S	QRE6P
QRE12S	QRE12P
QRE18S	QRE18P
QRE24S	QRE24P
QRE34S	QRE34P
QRE208S	QRE208P
AQRE12S	AQRE12P
MAQRE18S	MAQRE18P

SERIES "M"



4/5 ACTUAL SIZE

MINIATURE

For Aircraft, Instruments and Portable Equipment

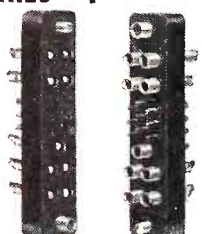
Light weight, Polarized, Locking Ring. Panel or Cable mounted with Hood and Cable strain relief.

Types Available

Receptacle	Plug
SM1S	SM1P
SM2S	SM2P
M4S	M4P
M5S	M5P
PM6S	PM6P
M7S	M7P
M9S	M9P
M12S	M12P
M48S	M48P

(Figures in above Code Nos. indicate number of contacts.)

SERIES "F"



2/5 ACTUAL SIZE

SPECIAL CONNECTORS

Unique design permits the use of two sizes of wire — #20 and #14 AWG—and assures uniform electrical and mating characteristics. Light-weight, polarized and panel mounted, these connectors are available with or without guides.

Types Available

Receptacle	Plug
F5S-G	F5P-G
F2S-8P-G	F2P-8S-G
F9S-9P-G	F9P-9S-G

(Figures in above Code Nos. indicate number of contacts. First figure for #20 AWG, second figure for #14 AWG.)

MANY FEATURES are covered by our Pat. No.'s 161900, 162795, 2411861, 2466370, 2513080, 2526325, 2532538. Other Pats. Pend.

MONOBLOC* CONSTRUCTION eliminates unnecessary creepage paths and reduces possibility of moisture and dust pockets and provides stronger molded parts.

MOLDED MELAMINE body parts insure greater mechanical strength and high dielectric and arc resistance.

PRECISION MACHINED CONTACTS are gold plated over silver for consistent electrical conductivity, prevention of corrosion and ease in soldering.

Connectors & components meet applicable government specifications.

WINCHESTER PRODUCTS AND WINCHESTER DESIGNS ARE AVAILABLE ONLY FROM WINCHESTER ELECTRONICS, INCORPORATED

Write or telephone our Engineering Department for information on the above or other connectors—or for consultation on difficult connector problems. Many other standard and special types available.

*Trade Mark

West Coast Branch:
1729 WILSHIRE
BOULEVARD
SANTA MONICA,
CALIFORNIA

WINCHESTER ELECTRONICS INCORPORATED

GLENBROOK, CONNECTICUT, U.S.A.

Type No.	Equivalent	Wattage	Percent	load °C.	Tapers	Temp. °C.	Min.	Max.	Rotation	Depth	Width	Bushing	Switches	or Data Sheet	(See note ■)	(See note ■)
W●	RA-20	2	10	70	Yes†	95	2	10,000	295°	5/8†	4 1/4	3/8	3/8-32	A-2	set-up chg.	\$.28
Q●	RV-2	1/4	20	30	Yes†	70	250†	15 meg†	300°	3/8†	1 5/8	3/8	3/8-32	A-4	set-up chg.	.149
HVC●(new)		2	20	30	Linear	70	5,000	30 meg.	250°	25/32	2 13/64		No	SM6915-100-001	set-up chg.	.92

SPECIAL PRODUCTS

IRC Type No.	Ratings	Standard Tolerance Percent	Temp. rise at rated load/°C.	Tapers	Temp. °C.	Min.	Max.	VALUES AVAILABLE			Min. Forward Current at 2V, drop for single cell	Catalog Bulletin or Data Sheet	Approx. Price Lots of 1 (See note ■)	Approx. Price Lots of 5000 (See note ■)
								Operating Temp./°C.	Length	O.D.				

CHOKES

CL 1/2		10			140	0.2 m.h.	2.0 m.h.	3/16			H-1	min. chg.	\$.0385
CL A●		10			140	0.2 m.h.	6.8 m.h.	1/4			H-1	min. chg.	.0385
CL 1●		10			140	.47 m.h.	22 m.h.	1/4			H-1	min. chg.	.0395
CL 2		10			140	1.0 m.h.	36 m.h.	21/64			H-1	min. chg.	.07

CAPACITORS

CAS	500 V.D.C.	‡			110	.22 mmf.	2.2 mmf.	1 3/32			K-1	prices on request	
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SELENIUM RECTIFIERS

6GA●	25 to 46 VIP/cell	‡	45		80	‡	‡	.450	.5-2.5 m.a.	.145	SR-1	prices on request	
9GA●	25 to 46 VIP/cell	‡	45		80	‡	‡	.500	.5-2.5 m.a.	.210	SRI-2	prices on request	
28GA	25 to 46 VIP/cell	‡	45		80	‡	‡	‡	20 m.a.	37/64	SR-2	prices on request	
19PA	25 to 46 VIP/cell	‡	45		80	‡	‡	‡	.5 m.a.	5/16	SR-2	prices on request	
25PA	25 to 46 VIP/cell	‡	45		80	‡	‡	‡	13 m.a.	3/8	SR-2	prices on request	
28PA	25 to 46 VIP/cell	‡	45		80	‡	‡	‡	20 m.a.	7/16	SR-2	prices on request	
28FR-1	25 to 46 VIP/cell	‡	45		80	‡	‡	‡	15 m.a.	3/8	SR-2	prices on request	
19PB	25 to 46 VIP/cell	‡	45		80	‡	‡	‡	‡	5/16	SR-2	prices on request	
25PB	25 to 46 VIP/cell	‡	45		80	‡	‡	‡	‡	3/8	SR-2	prices on request	
28PB	25 to 46 VIP/cell	‡	45		80	‡	‡	‡	‡	7/16	SR-2	prices on request	

Varistors(new) (supplied in same enclosures as selenium rectifiers listed above)

These rectifiers are also available in material with 125°C. maximum operating temperature.

FEED-THRU TERMINALS

HS-1	5,000 V.D.C.				190	‡	‡	‡	‡	‡	‡	‡	‡	HS-1	min. chg.	.25
------	--------------	--	--	--	-----	---	---	---	---	---	---	---	---	------	-----------	-----

- * Also supplied with adjustable feature.
- † Non-inductive—all other types are inductive to varying degrees.
- ‡ See data bulletin for more details.
- ‡ See data bulletin.
- x Check catalog for spacing.

● All IRC products may be purchased through Electronic Parts Distributors. Those identified with a ● are normally carried in their stocks.
 Prices indicated are based on average ratings & standard tolerances. Set-up & minimum charges apply in many cases. See price schedules for details.
 (new), indicates new items since January 1953.

FOR ADDITIONAL INFORMATION send for the Technical Bulletin indicated or contact your nearest IRC representative.

INTERNATIONAL RESISTANCE COMPANY



401 N. BROAD STREET • PHILADELPHIA 8, PA. • WALNUT 2-2166

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Branch Offices: **NEW YORK 6, N. Y., 165 Broadway, Cortlandt 7-5020**
CHICAGO 41, ILL., Klee Bldg., 4013 Milwaukee Ave., Pensacola 6-3910
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INCLUDES SAMPLES AND DESCRIPTIONS OF THE FOLLOWING...

VARGLAS SILICONE Class H insulating materials were pioneered by our Laboratory. Retain flexibility, electrical properties and mechanical strength in temperatures ranging from -85°F. to 500°F. Available in tubing, sleeving, lead wire, tying cord.

PERMAFIL-IMPREGNATED VARGLAS TUBING Fiberglass braid coated with General Electric's Permafil resin. Extremely tough, resistant to solvents and elevated temperatures, highly flexible. Can be bent or twisted with little or no loss of dielectric strength. Coils and standard 36" lengths.

VARGLAS SLEEVING AND TUBING Numerous types and grades—including synthetic-treated, varnished, lacquered, saturated, litewall and others.

VARGLAS NON-FRAY SLEEVING Fiberglass braid normalized to remove all organic impurities. It will withstand temperatures up to 1200°F. Recommended where dielectric properties are not paramount. Three types available.

VARFLO TUBING AND SLEEVING Vinyl-coated Fiberglas in full range of sizes, colors and grades. Extremely flexible with excellent heat aging qualities. Low priced.

VARFLEX COTTON TUBING AND SLEEVING Varnish or lacquer impregnated—for applications where MIL-I-3190 Class A materials are specified. All NEMA grades.

SYNTHOLVAR EXTRUDED TUBING Made in various standard formulations of vinyl polymers. Has high dielectric and tensile strength—will not support combustion nor absorb moisture. Type EG Approved under MIL-I-631A. Several others to meet special requirements.

NEW! VARGLAS SILICONE RUBBER SLEEVING AND TUBING—the culmination of 5 years of research—for applications requiring extraordinary flexibility. Details on request.



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VARFLEX CORPORATION,
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Please send me free folder containing samples of your electrical sleeving and tubing.

I am particularly interested in insulation for:

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 COMPANY.....
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ALNICO MAGNETS

Alnico permanent magnets are usually made to the customers' drawings and specifications, but some sizes and shapes are offered as stock items for use during the initial or experimental phases of a project. A few such stock types are listed below and these are available in Alnico V, with surfaces marked "f" finish ground, unless ordered without this grinding. A greater variety of stock items will be found listed in our Alnico magnet catalog PM-102A. Most Alnico magnets are sand cast and are subject to the

usual limitations and variations of sand castings, and Alnico materials are also quite hard and somewhat brittle. Alnico V is usually the preferred type of material due to the very high value of energy product which it possesses, and represents the best value in terms of gauss per dollar.

If Alnico magnets of types and shapes other than those listed are required, a blueprint should be furnished for quotation. Complete information should be

included including tolerances, grinding required, type of Alnico and direction of magnetization. The tolerances which may be expected to be held without grinding for both cast and sintered magnets are shown in tables below.

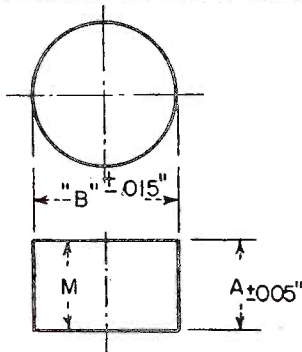
Small magnets are sometimes furnished in sintered Alnico, and three such parts are shown in this listing. Most sintered magnets require rather expensive tooling and are usually only considered when the quantity required is large.

ALNICO PHYSICAL PROPERTIES						
Magnet Material	Specific Gravity	Resistivity Microhms/CM ³ at 25° C.	Mean Coef. of Expansion 20°-300°C	Tensile Strength Psi.	Transverse Modulus of Rupture -Lbs.	Hardness Rockwell C
Alnico I	6.9	75	12.6	4197	13973	45
Alnico II	7.1	65	12.4	3080	7230	45
Alnico III	6.9	60	13.0	12386	22510	45
Alnico IV	6.97	75	13.1	9174	24483	45
Alnico V	7.3	47	11.3	5456	10826	50
Alnico V DG	7.31	47	11.3	5450	10500	50
Alnico VI	7.3	50	11.4	23000	45000	56
Alnico VII	7.17	58	11.4	—	2000	60
Alnico XII	7.2	62	11.0	39500	50000	58

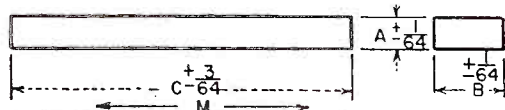
ALNICO MAGNETIC PROPERTIES						
Peak Magnetizing Force Oersteds	Peak Induction Gauss	Remanence B _r -Gauss	Coercive Force H _c -Oersteds	Energy Product (B _d H _d) Max.	B _d Gauss	H _d Oersteds
2000	12500	7100	450	1.40 x 10 ⁶	4600	305
2000	12900	7300	530	1.55 x 10 ⁶	4620	335
2000	12000	7000	470	1.40 x 10 ⁶	4300	325
3000	11600	5200	750	1.25 x 10 ⁶	3000	415
3000	16500	12500	600	4.50 x 10 ⁶	9680	465
3000	17100	13100	640	5.50 x 10 ⁶	10400	530
3000	16000	10500	750	3.75 x 10 ⁶	7280	515
3000	12450	7200	1050	2.75 x 10 ⁶	4000	690
4000	13200	5800	950	1.75 x 10 ⁶	3100	565

PLUGS

Part No.	Wt. Ozs.	A	B
10001	.68	.430	.689
10002	1.00	.522	.759
10003	1.47	.626	.840
10004	1.47	.535	.908
10005	2.15	.648	.998
10006	3.16	.765	1.114
10007	3.16	.633	1.224
10008	4.64	.748	1.365
10009-A	6.80	.970	1.451

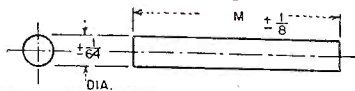


BARs



Part No.	Wt. Lbs.	A	B	C
3113	.050	.125	.375	4
3114	.075	.187	.375	4
3115	.100	.250	.250	6
3116	.225	.375	.375	6
3117	.398	.500	.500	6
3118	.596	.500	.750	6
3119	.796	.500	1.000	6
3120	.895	.750	.750	6
3121	1.590	1.000	1.000	6

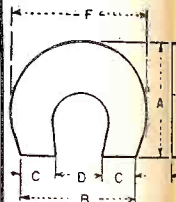
RODS



Part NO.	Wt. Lbs.	Dia.	Length
2056	.018	.122	5 1/2
2058	.041	.188	5 1/2
2061	.075	.254	5 1/2
2064	.155	.304	8
2065	.244	.383	8
2067	.416	.500	8
2070	.522	.560	8
10001	.799	.430	8
10002	.967	.522	8
10003	1.175	.626	8
10004	1.376	.535	8
10005	1.656	.648	8

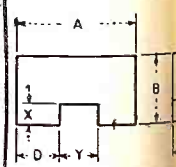
HORSESHOE TYPE

Part No.	Wt. lbs.	A	B	C	D	E	F
244	.138	1.250	1.250	.437	.375	.437	1.500
286	.922	2.500	3.000	.750	1.500	.750	3.000
537	.283	1.562	1.625	.625	.375	.625	1.812
642	.292	1.375	2.000	.625	.750	.609	2.000
812	.467	4.125	4.000	1.250	1.500	1.250	5.000
1386	.068	1.125	.718	.187	.343	.250	1.125
1598	.237	3.312	4.000	1.000	1.250	1.000	4.000

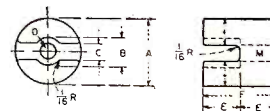


CHANNEL HORSESHOE

Part No.	Wt. Lbs.	A	B	C	D	X	Y
1945	.007	.500	.312	.187	.156	.125	.187
1946	.011	.625	.375	.187	.187	.125	.250
1947	.021	.750	.500	.250	.250	.187	.250
1948	.044	1.000	.625	.312	.312	.250	.375
1949	.089	1.250	.750	.406	.406	.250	.437
1950	.153	1.500	.875	.500	.500	.312	.500



HOLDING MAGNETS

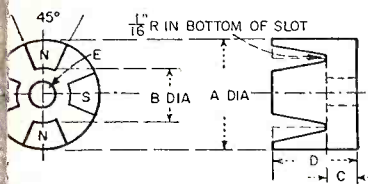


Part No.	Wt. Lbs.	A	B	C	D	E	F
2889	.118	.875	.375	.312	.250	.500	1.000
2225	.344	1.250	.531	.312	.312	.687	1.375
2226	.630	1.500	.625	.375	.375	.875	1.750
2227	1.44	2.125	.968	.625	.375	1.125	2.062



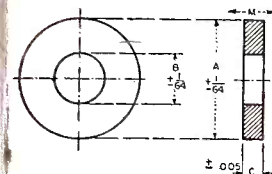
ALNICO MAGNETS

HOLDING MAGNETS



Part No.	Weight Lbs.	No. of Poles	A	B	C	D	E
3130	.166	6	1.250	.625	.250	.750	.250
3131	.042	2	.750	.375	.250	.500	.218
3132	.010	2	.500	.250	.156	.375	.125
3133	.370	6	1.500	.750	.312	.875	.375
3136	.068	4	1.000	.500	.250	.750	.250

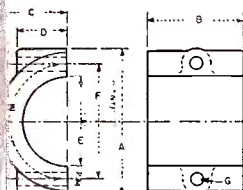
DISCS



Part No.	Weight Lbs.	A	B	C
3149	.020	1.000	.500	.125
3150	.038	1.250	.625	.156
3151	.067	1.500	.750	.187

These discs are usually used in conjunction with the holding magnets listed above.

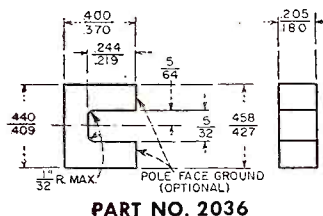
SEPARATOR MAGNETS



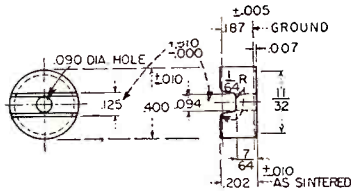
Part No.	Weight Lbs.	A	B	C	D	E	F	G
3201	1.50	3.500	2.375	1.687	1.250	2.125	2.750	.312
3202	7.25	6.437	3.250	3.125	2.062	4.000	5.625	.312
3203	14.80	7.750	4.000	4.062	3.500	5.250	6.500	.437
3204	2.35	4.437	2.000	2.187	1.687	2.750	3.625	.312
2115-A	4.73	5.000	2.375	2.500	2.062	2.500	3.625	.312
2106	2.99	3.750	2.375	1.625	1.625	1.750	2.750	.312

PART NO. 2106 is similar to sketch except surface opposite to poles is flat.

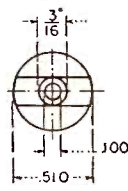
SINTERED ALNICO II MAGNETS



PART NO. 2036



PART NO. 2077



PART NO. 2815

TOLERANCES CLOSER THAN THE FOLLOWING CAN ONLY BE HELD BY GRINDING

Tolerances for sintered Alnico	
Dimensions	Up to .125 ± .010"
Dimensions	.126 to .500 ± .015"
Dimensions	.501 to 1.000 ± .025"

Tolerances for Cast Alnico	
Dimensions	up to 2" ± 1/64
Dimensions	2" to 4" ± 1/32
Dimensions	4" to 6" ± 3/64

SPECIAL MAGNETIC MATERIALS

INDUR is a soft magnetic material consisting of 49% cobalt, 49% iron, and 2% nickel. It is made up to special order in the form of bars, plates, and forgings. Its saturation value of about 24,000 gauss is particularly useful for pieces and other magnetic structures where high field strengths are required.

ALLOY is a new ferro magnetic material developed by the Bell Telephone Laboratories whose temperature coefficient of elastic modulus may be controlled over a wide range and which has good ferro magnetic stability and mechanical strength. This alloy contains about 42% nickel, 9% molybdenum, balance iron, and is usually made in

the form of cold-rolled strip. This alloy is used for reeds of vibrating reed selectors.

VICALLOY is a permanent magnet alloy containing about 10% vanadium, 50% cobalt, and the balance iron. It may be fabricated in the form of castings, hot-rolled bars and forgings, or cold-rolled strip and wire. The coercive force of this material may range from 200 to 300 oersteds and the remanence from 3,000 to 10,000 gauss. 2-mil cold-rolled tape has been used as a magnetic recording medium. Parts fabricated from hot-rolled bars and forgings have been used as rotors in hysteresis clutches and motors.

CUNICO is a special purpose permanent

magnet alloy composed of copper, nickel, and cobalt. It may be produced in the form of small bars, strip or wire, or in sintered form. This alloy has a nominal coercive force of 700 oersteds, a remanence of 3200 gauss, and an energy product BHmax of about .80 x 10⁶.

CUNIFE is a special purpose permanent magnet alloy of copper, nickel, and iron whose magnetic properties are developed after extensive cold-working. It is, therefore, normally produced only in the form of wire or cold-rolled tape. It has a coercive force of about 500 oersteds, a remanence of 5400 gauss, and an energy product BHmax of about 1.35 x 10⁶.



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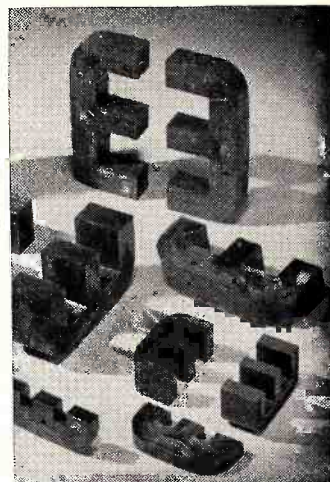
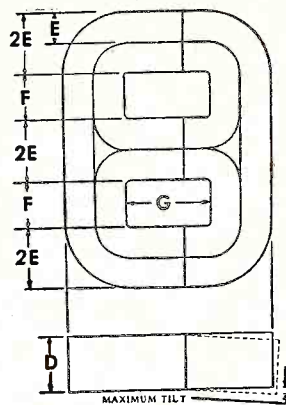
General Office & Plant: Marengo, Illinois New York: Empire State Bldg. Boston: John Hancock Bldg. Los Angeles: 3450 Wilshire Blvd.

SILECTRON "E" CORES

Silectron 3-phase "E" cores are made from highly oriented silicon steel. Insulated strip of the proper width is wound on a mandrel and the resultant core assembly is heat-treated, bonded, and cut so as to provide two core halves.

Careful production control of this process results in accurately dimensioned and matched core halves whose effective air gap at the butt joint is very small. The use of "E" cores results in weight and size reduction as well as higher efficiency and possible cost savings.

All Arnold 3-phase "E" cores are tested under 3-phase operating conditions for exciting current and core loss. The 4 mil type AJ-TH cores are tested at 400 cps at a peak flux density of 15,000 gauss. The 4 mil type A-TA cores, are tested at 60 cps at a peak flux density of 10,000 gauss. The test coils are delta connected in making these 3-phase tests.



4 MIL SILECTRON "E" CORES

DIMENSIONS IN INCHES

CORE NUMBER	WEIGHT (LBS.)	STRIP WIDTH D	BUILD UP E	TOTAL BUILDUP 2E	WINDOW WIDTH F	WINDOW LENGTH G
AJ-TH43	0.25	3/8	3/16	3/8	1/2	1 1/8
AJ-TH69	0.31	1/2	3/16	3/8	7/16	1
AJ-TH53	0.32	3/4	1/8	3/8	7/16	1
AJ-TH25	0.44	1/2	3/16	3/8	5/8	1 5/8
AJ-TH55	0.59	5/8	3/16	3/8	3/4	1 3/16
AJ-TH89	0.72	1/2	1/4	1/2	3/4	2
AJ-TH83	0.75	3/4	1/4	1/2	1/2	1 1/8
AJ-TH84	0.83	5/8	1/4	1/2	3/4	1 5/8
AJ-TH67	0.93	5/8	1/4	1/2	3/4	2
AJ-TH87	0.96	3/4	1/4	1/2	1 1/16	1 5/8
AJ-TH56	0.99	3/4	1/4	1/2	5/8	1 1/8
AJ-TH66	1.06	7/8	1/4	1/2	1 1/16	1 5/8
AJ-TH78	1.15	1	3/4	1/2	1/2	1 1/16
AJ-TH65	1.28	1	1/2	1/2	1 1/16	1 5/8
AJ-TH90	1.45	1	3/4	1/2	3/4	2
AJ-TH31	1.53	3/4	3/8	3/4	1 3/16	1 1/4
AJ-TH47	2.05	1 1/8	5/16	5/8	5/8	1 15/16
AJ-TH80	2.14	1	3/8	3/4	1 1/16	1 5/8
AJ-TH30	2.15	1 1/4	5/16	5/8	3/8	1 13/16
AJ-TH58	2.26	1 1/4	5/16	5/8	1 1/16	2 1/16
AJ-TH61	2.36	1 1/4	5/16	5/8	7/8	1 13/16
AJ-TH95	2.47	1	3/8	3/4	1	1 3/4
AJ-TH94	2.63	1	3/8	3/4	1 1/4	1 3/4
AJ-TH85	2.80	1	3/8	3/4	1	2 3/8

4 MIL SILECTRON "E" CORES

DIMENSIONS IN INCHES

CORE NUMBER	WEIGHT (LBS.)	STRIP WIDTH D	BUILD UP E	TOTAL BUILDUP 2E	WINDOW WIDTH F	WINDOW LENGTH G
AJ-TH71	2.96	1 1/8	3/8	3/4	7/8	2 1/4
AJ-TH35	3.05	1	3/8	3/4	1 1/4	2 1/2
AJ-TH91	3.33	7/8	7/16	7/8	1	3
AJ-TH70	3.78	1 1/4	7/16	7/8	1 5/16	1 7/8
AJ-TH4	3.80	1 1/4	3/8	3/4	1 1/4	2 1/2
AJ-TH92	4.51	1	1/2	1	1	3
AJ-TH64	4.58	1 1/2	3/8	3/4	1 1/4	2 1/2
AJ-TH2	4.93	1 1/2	1/2	1	1	2 1/4
AJ-TH72	4.94	1 1/8	1/2	1	1 1/4	2 1/2
AJ-TH73	4.95	1 1/4	3/8	3/4	1 1/8	4 1/16
AJ-TH82	5.30	1	1/2	1	1 5/8	3 3/8
AJ-TH79	5.34	1 3/4	3/8	3/4	1 1/4	2 1/2
AJ-TH45	5.70	1 1/8	5/16	1 1/8	1 1/2	2
AJ-TH68	8.05	2	1/2	1	1	3
AJ-TH86	10.12	2	1/2	1	1 3/8	3 7/8
AJ-TH75	10.66	1 5/8	1/2	1	1 1/2	5 1/16

12 MIL SILECTRON "E" CORES

A-TA2	1.22	3/8	3/8	3/4	1 1/4	2 1/2
A-TA7	2.30	1 1/8	1/4	1/2	1 1/4	2 5/8
A-TA8	6.96	1 1/2	1/2	1	1 1/4	2 1/2
A-TA4	9.48	1 3/8	5/8	1 1/4	1 3/8	3 1/2

BANDING TOOLS AND ACCESSORIES

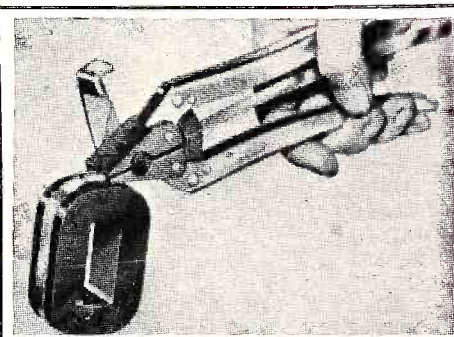
The COREBINDER tool, used in tensioning Corebinder strapping around core assemblies, weighs less than 12 ounces, and requires only one hand to operate. It has an AUTOMATIC TENSION REGULATOR which enables it to be set to the degree of tension desired (37 1/2 lbs., 75 lbs., or 150 lbs.) and will automatically slack when that tension has been achieved. No further tension is possible nor will tension already achieved be lost until the tool is released. A BUILT-IN CUTTER completes the advanced features of this unique strapping tool. With this COREBINDER method, transformer assembly is simplified

considerably, time of assembly is substantially reduced, costs are cut, and the possibility of assembly error is eliminated. Using this method, the operator will be able to achieve uniform regularity of tension on core after core.

MATERIALS USED:

#1991 COREBINDER TOOL — weighs less than 12 ounces; is simple to operate with one hand; has a built-in cutter and an automatic tension regulator.

#500 HAMMER-CUTTER — this is an auxiliary tool which can be used to pre-cut COREBINDER strapping to predetermined lengths.



STRAPPING					SEALS		
No.	Width	Thickness	Ft./coil*	Wt./coil*	No.	Length	No./ctn.
391	3/16"	.006	785	3 lbs.	1591	1/4"	1000
392		.012	393				
393		.006	785				
394	3/8"	.012	393	6 lbs.	1592	3/8"	1000

* Figures are approximate.



THE ARNOLD ENGINEERING COMPANY

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MOLYBDENUM PERMALLOY POWDER CORES

Molybdenum Permalloy cores are produced from insulated powder of the alloy containing about 2% molybdenum, 81% nickel and the balance iron. This powder is pressed into cores at pressures of about 100 tons per square inch and they are then annealed in an atmosphere of hydrogen. The finished cores have high electrical resistivity and permeability, and low hysteresis and eddy current loss. The shift of permeability due to strong magnetization is negligible, and the permeability remains fairly constant over a wide range of flux densities.

In order to obtain a constant permeability over a definite

temperature range, a small amount of powder of a special Ni-Mo-Fe alloy having a low Curie point is added to the regular powder. Cores manufactured from this stabilized powder have a change of permeability of less than $\pm 0.1\%$ over specific temperature ranges. The regular unstabilized powder has a change of permeability of about plus 1% per 100° F. temperature change.

A number of different sizes of toroids are produced in four different permeabilities for use at various frequencies up to 200 kc. The electrical specifications and tolerances are tabulated below:

Permeability, μ	Core Loss Ohms/Henry/unit of μ	Core Loss Test Frequency	Magnetic Stability to D. C. Magnetization
125 \pm 10	0.24 max.	1800 cps	$\pm 0.5\%$
60 \pm 5	1.70 max.	8000 cps	$\pm 0.3\%$
26 \pm 2	76 max.	75 kc.	$\pm 0.2\%$
14 \pm 1	65 max.	75 kc.	$\pm 0.1\%$

The core finish is a baked enamel or varnish as shown in the table below. In the case of cores with finishes 2, 4 or 5, each core is tested for the dielectric strength of the core finish. It is placed between two moist felt pads and a 60 cycle rms voltage is applied. The test voltage is 1250 volts for core finishes #2 and #4, and 2650 volts for core finish #5.

The techniques required for producing powder cores of Molybdenum Permalloy preclude the possibility of fabricating complicated shapes. Although the major usage is centered

around the use of the toroids listed below, other sizes and shapes may be available for special applications.

Molybdenum Permalloy powder cores are used in telephone and communications work for loading coils; for high pass, low pass, band pass and band suppression filters, and for resonant circuits, all of which require the use of high Q toroids. They are also frequently used in decade inductors and interference filters on power circuits.

STANDARD MOLYBDENUM PERMALLOY POWDER CORES

AECO PART NO.	NOMINAL PERMEA- BILITY	NOMINAL DIMENSIONS (inches before finish)			CORE FINISH	TEMP. STAB.	NOMINAL INDUCTANCE mh/1000 turns	USUAL FREQUENCY RANGE
		O. D.	I. D.	H.				
A-206068-2	125	0.800	0.500	0.250	2	A	68	Up to 15 KC
D-951068-4	125	0.800	0.500	0.250	4	D	68	Up to 15 KC
A-848032-2	60	0.800	0.500	0.250	2	A	32	10 to 50 KC
A-511014-2	26	0.800	0.500	0.250	2	A	14	30 to 75 KC
D-608014-4	26	0.800	0.500	0.250	4	D	14	30 to 75 KC
A-310094-2	125	0.900	0.550	0.300	2	A	94	Up to 15 KC
A-930157-2	125	1.060	0.580	0.440	2	A	157	Up to 15 KC
D-671157-3	125	1.060	0.580	0.440	3	D	157	Up to 15 KC
A-395075-5	60	1.060	0.580	0.440	5	A	75	Up to 15 KC
D-269075-4	60	1.060	0.580	0.440	4	D	75	10 to 50 KC
A-548127-2	125	1.300	0.785	0.420	2	A	127	10 to 50 KC
A-381065-2	60	1.300	0.785	0.440	2	A	65	Up to 15 KC
D-381065-3	60	1.300	0.785	0.440	3	D	65	10 to 50 KC
A-270028-2	26	1.300	0.785	0.440	2	A	28	30 to 75 KC
D-270028-3	26	1.300	0.785	0.440	3	D	28	30 to 75 KC
A-013015-2	14	1.300	0.785	0.440	2	A	15	50 to 200 KC
D-013015-3	14	1.300	0.785	0.440	3	D	15	50 to 200 KC
A-585079-2	125	1.350	0.920	0.350	2	A	79	Up to 15 KC
A-254168-2	125	1.570	0.950	0.570	2	A	168	Up to 15 KC
A-438281-2	125	1.840	0.950	0.710	2	A	281	Up to 15 KC
D-466281-3	125	1.840	0.950	0.710	3	D	281	Up to 15 KC
A-759135-3	60	1.840	0.950	0.710	3	A	135	10 to 50 KC
A-411037-2	26	1.840	1.130	0.600	2	A	37	30 to 75 KC
B-411037-3	26	1.840	1.130	0.600	3	B	37	30 to 75 KC
A-957020-2	14	1.840	1.130	0.600	2	A	20	50 to 200 KC
B-368020-3	14	1.840	1.130	0.600	3	B	20	50 to 200 KC
A-715152-2	125	2.000	1.250	0.530	2	A	152	Up to 15 KC
A-109156-2	125	2.250	1.400	0.550	2	A	156	Up to 15 KC
D-927156-3	125	2.250	1.400	0.550	3	D	156	Up to 15 KC
A-488075-2	60	2.250	1.400	0.550	2	A	75	10 to 50 KC
A-384033-2	26	2.250	1.400	0.550	2	A	33	30 to 75 KC
D-384033-3	26	2.250	1.400	0.550	3	D	33	30 to 75 KC

Cores may be furnished stabilized in regard to permeability as noted:

Type A—Unstabilized—Approximately 1% per 100° F.

Type B—Stabilized $\pm 0.1\%$ from 55° F. to 95° F.

Type D—Stabilized $\pm 0.1\%$ from 30° F. to 130° F.

Cores with finishes 2, 4, 5 designed to permit winding with heavy Formex insulated wire without supplementary insulation over core.

Cores are coated with various types of enamel and varnish finishes:

#2—Enamel—500 volt rms 60 cycle breakdown requirement

#3—Wax tight varnish—no breakdown requirement

#4—Wax tight varnish—500 volt rms 60 cycle breakdown requirement

#5—Enamel—1000 volt rms 60 cycle breakdown requirement



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New York: Empire State Bldg.

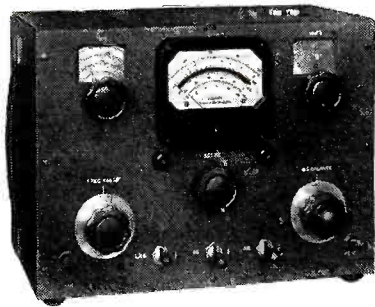
Boston: John Hancock Bldg.

Los Angeles: 3450 Wilshire Blvd.

PRECISION ELECTRONIC MEASURING INSTRUMENTS



FM-AM SIGNAL GENERATOR
TYPE 202-B



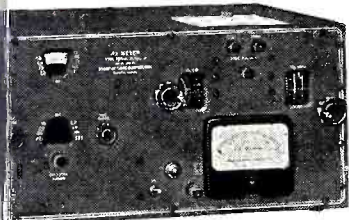
Q-METER
TYPE 190-A

Signal Generators

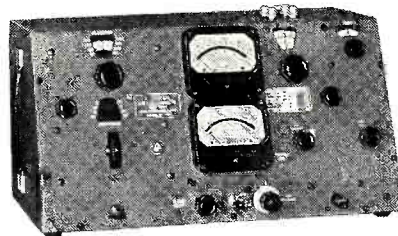
Frequency and Amplitude Modulated
For Aircraft Navigation Receivers
For Mobile Communications Receivers

Q Meters

Low, Medium and High Frequencies
Very High Frequencies



RX METER
TYPE 250-A



Q METER
TYPE 260-A

Univerters

Low, Medium and High Frequencies
Impedance Measurements

Write for complete information

Q METERS						
Type	Freq. Range	Q Range	Tuning Capacity Range		Q Accuracy	Price
260-A	50 kc to 50 mc	10 to 625	30-450 mmf		5% to 30 mc	\$725.
190-A	20 mc to 260 mc	5 to 1200	7.5 to 100 mmf		7% to 100 mc	\$625.
FM-AM SIGNAL GENERATORS						
Type	Freq. Range	Output Range	Modulation		Application	Price
			FM	AM		
202-B	54-216 mc	0.1 to 200,000 uv	0-240 kc	0-50%	General Mobile Telemetry	\$975.
202-C	54-216 mc	0.1 to 200,000 uv	0-240 kc	0-50%		\$1090.
202-D	175-250 mc	0.1 to 200,000 uv	0-240 kc	0-100%		\$980.
WIDE BAND IMPEDANCE MEASURING EQUIPMENT — RX Meter						
Type	Freq. Range	R Range	C Range		L Range	Price
250-A	0.5 to 250 mc	15 to 100,000 ohms	0-20 uuf		0.001 uh-100 mh	\$1250.
OMNI-RANGE SIGNAL GENERATOR (Crystal Monitored)						
Type	Freq. Range	Output Range	Modulation		Application	Price
211-A	88-140 mc	0.1 to 200,000 uv	0-100% am		Omni-Range Rcvrs.	\$1800.
GLIDE SLOPE SIGNAL GENERATOR						
Type	Freq. Range	Output Range	Modulation		Application	Price
232-A	329-335 mc	1.0 to 200,000 uv	0-100% am		Glide Slope Rcvrs.	\$1500.
UNIVERTERS						
Type	Freq. Range	Output Range	Modulation		Accessory to	Price
			FM	AM		
207-A	0.1 to 55 mc	0.1 to 100,000 uv	0-240 kc	0-50%	202-B and 202-C 202-D	\$345.
207-B	0.1 to 55 mc	0.1 to 100,000 uv	0-240 kc	0-50%		345.



BOONTON RADIO

BOONTON · N.J. · U.S.A.

Corporation

FIGURES	NICKEL TYPES	COPPER TYPES	CAPACITY MMFD.	PEAK VOLTAGE KILOVOLTS	RMS AMPS		OVERALL LENGTH	MAXIMUM O. D.	CONTACT DIAMETER	MOUNTING CENTERS
					NICKEL	COPPER				
34, 33	VC	VCC	6, 12, 25, 50, 75, 100, 150	20, 30	14	60	6 1/2	2 1/8	1 1/8	5 1/8
34, 33	VC	VCC	200, 250	20, 30	14	60	6 1/2	2 1/8	1 1/8	5 1/8
31	W		6, 12, 25, 50, 100	20	10.5		4 1/8	2 1/4	3/8	3 7/8
30	X		5, 10, 15, 20, 25	17	7		3 1/4	1 1/8	2 3/16	2 7/8
18	XW		25	35	14		2 3/8	3	1/4	2 1/8
29	Y		1, 2, 3, 4, 5	17	7		3 1/4	1 1/8	3/16	2 7/8
35	K		12, 25, 50	40, 50	14		8 1/2	3	1 1/8	7 3/4
49		JCS-1	25, 50, 75, 100, 150	7.5, 10, 15		42	3 3/4	2 1/8	7/8	3 1/4
48		JCS-2	10, 20, 25, 50	7.5, 10, 15		20	2 1/8	1 1/2	1 1/8	2 1/4
50		JCS	250	7.5, 10, 15		42	3 3/4	2 5/8	7/8	3 1/8
52		JCS	500	7.5, 10, 15		42	4	3 1/8	5 5/16	3 1/2
53		JCS	1000	7.5, 10, 12		42	4 5/8	3 5/8	2	3 7/8
51		JCSH	75	35, 45		42	4	2 1/8	7/8	3 3/8
44		JCSL	100	3, 5		20	2 1/2	1 1/8	1 1/8	2 1/8
45		JCSL	250	3, 5		20	2 1/8	1 1/8	3/16	2 1/8
46		JCSL	500, 750	3, 5		42	3 7/8	2 1/8	7/8	3 1/8
47		JCSL	1000, 1500	3		42	3 3/4	2 7/8	7/8	3 1/4
47		JCSL	2000	2		42	4	2 7/8	7/8	3 1/2
32		JC-2	25, 50, 75, 100	20, 30		42	3 1/8	3 1/4	1 1/8	3 1/4
41		JC-3	20, 40, 50, 60	35, 45, 55, 60		140	8 1/4	3 1/2	2 3/16	6 1/4
40		JC-4	75, 100, 125	35, 45, 55, 60		175	9 1/4	5	3 3/16	7
39		JC-5	200	35, 45, 55, 60		225	11 1/4	7	4 1/8	8 3/4
36	M	MC	500, 750, 1000	10, 15, 20	21	60	8 3/8	5	2 3/16	6 1/4
37	ML	MLC	500, 750, 1000	25, 30	21	60	9 1/4	5	2 3/16	7 1/4
36	MH	MHC	200 or less	35, 40, 50	21	60	8 1/2	5	2 3/16	6 3/8
38	MM	MMC	1500, 2000	10, 15	21	125	9 1/4	6 1/8	4 1/8	6 3/4
38	MMH	MMHC	450	35, 40, 45	21	125	9 1/4	6 1/8	4 1/8	6 3/4
43		MC-1	500, 750, 1000	10, 15		180	3 1/4	4 1/8	2	2 1/8
42		MMC-1	2000	10, 15		225	4	6 1/8	3 1/8	4
16	T		5-25	20	10.5		6 3/8	2 1/4	1/2 x 1 1/8	4 1/8
16		TC	5-25	20		20	6 5/8	2 1/8	1 1/8	4 1/8
15	RX		2-8	10, 15, 20	10.5		5 1/2	1 3/4	1 1/2 x 5/8	3
14	TR		2-8	17	10.5		6 1/8	2 1/4	3/8 x 1 1/8	3 7/8
19		ECS	2-8 (Adjustable)	10, 15		20	2 1/8	1 1/4	1	2 1/8
12	AT		10-50, 15-75	20, 25, 30	10.5		6 1/2	3	1/2 x 5/8	4 1/8
13		ATC	20-35, 10-50	20, 30		20	6 1/8	3 1/8	1 1/8	4 1/8
11		ATCS	10-110, 20-200	7.5, 10, 15		20	6 1/8	3 1/8	3/8 x 1 1/8	4 1/8
10		UCS	5-200	7.5, 10, 15		42	8 3/8	2 5/8	7/8 x 2 3/16	4 1/4
10		UCS	10-300	7.5, 10, 15		42	8 3/4	2 3/8	7/8 x 2 3/16	4 5/8
9		UCS	10-375	7.5, 10, 15		42	8 3/4	3 1/8	7/8 x 2 3/16	4 5/8
9		UCS	25-500	7.5, 10, 15		42	9	3 1/8	7/8 x 2 3/16	4 1/8
—		UCSL	4-100	3, 5		20	4 3/4	1 1/8	1 1/2 x 5/8	2 1/8
22		UCSL	4-250	3, 5		20	4	2 1/8	—	2 1/2
21		UCSL	5-500, 10-750	3, 5		42	5 3/8	2 1/8	7/8	3 3/8
20		UCSL	7-1000	2, 3		42	4 1/8	3 1/8	2 3/16	3 1/2
20		UCSL	50-2000	2, 3		42	5 1/8	3 1/8	2 3/16	3 1/8
17		UCSV	8-110	7.5, 10, 15		60	4 3/4	3	7/8	3 1/8
17		UCSVH	10-35	25, 35		60	4 1/8	3	7/8	3 1/8
7		UCSM	4-500	7.5, 10, 15		80	10 5/8	3 5/8	2 x 3/8	5 7/8
8		UCSX	10-500	7.5, 10, 15		60	10 1/8	3 1/2	7/8 x 3 1/8	5 3/8
1		UCSX	25-700	7.5, 10, 12		60	9 5/8	3 3/4	2 x 3 1/8	3 1/8
1		UCSX	25-1000	7.5, 10, 12		60	9 1/8	3 3/4	2 x 3 1/8	5
2		UCSXH	10-200	35, 45		60	10 3/4	4 1/2	2	5 1/2
3	U	UC	50-250	10, 15, 20	21	60	11 1/8	5	2	6 1/2
3	UH	UHC	10-75	35, 45, 55, 60	21	60	11 1/8	5	2	6 1/2
3	UH	UHC	75-150	35, 45, 55, 60	21	60	12	5	2	7 1/8
6	UX	UXC	25-500	10, 15, 20	21	60	14	5	3 3/16	7 1/8
6	UXH	UXHC	25-150	35, 45, 55	21	60	14 5/8	5	3 3/16	8 1/4
4	VMM	VMMC	50-1000	10, 15	21	100	14 7/8	6 1/8	4 1/8	7 3/4
5	VMM	VMMC	100-2000	10, 15	21	125	15 7/8	6 1/8	4 1/8	8 5/8
5	VMMH	VMMHC	25-450	35, 45, 55	21	125	16	6 1/8	4 1/8	8 3/4
57		R-1	Vacuum Switch	50, 60		65	6 5/8	2	1 1/8	4 1/8
60		R-2	Vacuum Switch	50, 60, 70		60	8 1/2	2 1/8	1 1/8	6 1/2
56		R-3	Vacuum Switch	35		50	4 1/2	1 7/8	1 1/2 x 1 1/8	2 7/8
55		R-4	Vacuum Switch	20		65	4 1/2	1 7/8	1 1/8	2 3/4
54		R-5	Vacuum Switch	20		50	3 1/2	1 7/8	1 1/2 x 1 1/8	2 1/8
58		R-7	Vacuum Switch	40		65	5 7/8	1 7/8	1 1/8	4
59		RH-1	Vacuum Switch	40, 50		200	6 1/4	2 5/8	1 1/8 x 2	4 1/4
—		RH-2	Vacuum Switch	50, 60		200	9 7/8	3	1 1/8 x 2	8
23	JF	Feed-thru	100 mmfd.	15		42	6 1/2	2 5/8	1 1/8	5 1/8
24	JFS	Feed-thru	100 mmfd.	7.5		42	3 1/8	2	7/8 x 1 1/8	3 1/8
25	JFL	Feed-thru	100 mmfd.	3		20	3 1/8	1 1/4	1 1/8	2 7/8
28		VD—Probe Capacitance Volt. Divider—1.1 mmfd input		20, 30			7 1/2	1 1/8	3/8	4 3/4
27		VD—Fixed Capacitance Volt. Divider—1.8 or 3.6 mmfd		50, 60			8 1/2	2 1/8	1 1/8 x 1 1/8	5 3/4
26		VD—Adjustable Capac. Volt. Divider		50, 60			8 5/8	2 1/8	1 1/8	6

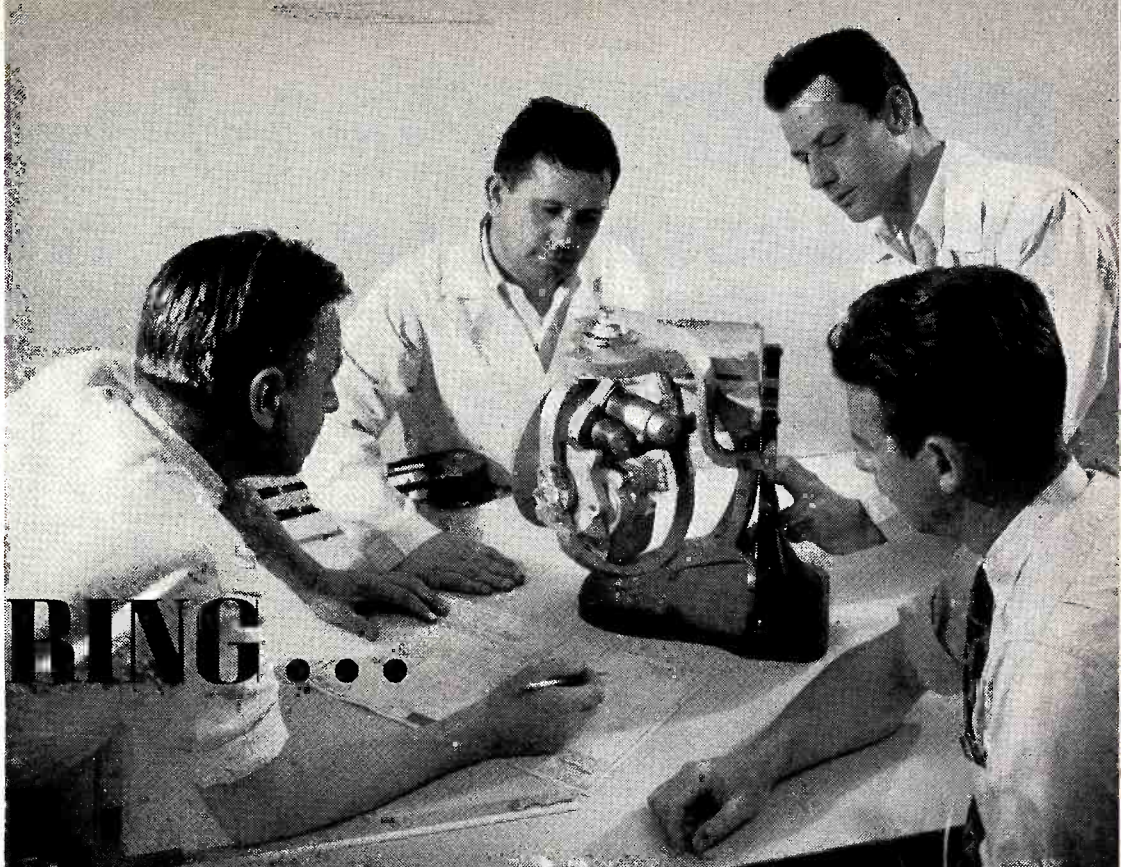
Current ratings based on 50°C. temp. rise above ambient
Switch current ratings approximately 50% at 10 megacycles

Correspondence invited for other capacities, voltages, and ratings.

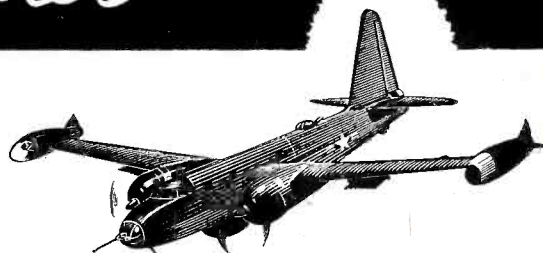
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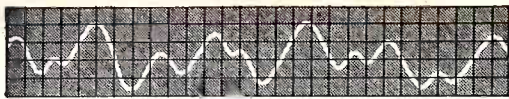
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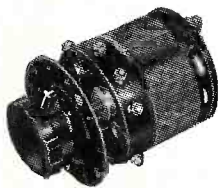
POWERSTAT VARIABLE TRANSFORMERS

deliver a continuously adjustable output voltage from a-c power lines

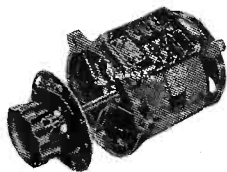
A POWERSTAT variable transformer is an autotransformer of toroidal core design with a movable brush tap that is rotated to deliver any required output voltage from zero to, or above, line voltage. Important features include: excellent regulation, high efficiency, conservative ratings, zero waveform distortion, rugged mechanical construction and smooth control. Numerous standard POWERSTATS in ratings from 150 VA to 100 KVA are available for 115, 230 and 460 volt, single and three phase operation. Most are offered in either manual or motor-driven models. The chart lists some of the most-called-for types. Others — designed for specific applications — are available for every requirement. Consult us about your specific needs.



TYPE 10



TYPE 20



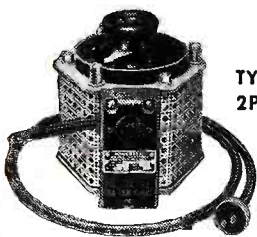
TYPE 116U



TYPE 116



TYPE 1226



TYPE 2PF1126



TYPE 1156



TYPE MZ1126-3Y

SEND FOR POWERSTAT BULLETIN P553G

Line Volt.	Out-put Volt.	Max. Out-put Amp.	Out-put KVA	Fre- quency	Type	Approximate Net Wt. (Lbs.)	Shipp. Wt. (Lbs.)	**Standard Motor Speeds
120	0-132	1.25	0.165	±60	*10	1.8	3	-----
115	0-135	3.0	0.4	±60	*20	4	6	-----
	0-135	7.5	1.0	50/60	*116U	10	11	-----
	0-135	7.5	1.0	50/60	116	11	12	-----
	0-135	7.5	1.0	50/60	3PF116	11	12	-----
	0-135	7.5	1.0	50/60	3TF116	11	12	-----
	0-135	15.0	2.0	50/60	1126	21	25	W,X,Y,Z
	0-135	15.0	2.0	50/60	F1126	21	25	W,X,Y,Z
	0-135	30.0	4.0	50/60	1126-2P	48	55	W,X,Y,Z
	0-135	45.0	6.1	50/60	1156	73	80	W,X,Y,Z
	0-135	90.0	12.1	50/60	F1156	74	81	W,X,Y,Z
	0-135	135.0	18.2	50/60	1156-2P	150	170	W,X,Y,Z
	0-135	180.0	24.3	50/60	1156-4P	225	295	W,X,Y
230	0-270	3.0	0.81	50/60	*216U	10	11	-----
	0-270	3.0	0.81	50/60	216	11	12	-----
	0-270	3.0	0.81	50/60	3PF216	11	12	-----
	0-270	3.0	0.81	50/60	3TF216	11	12	-----
	0-270	7.5	2.0	50/60	*116U-2S	17	22	-----
	0-270	7.5	2.0	50/60	*116-2S	18	23	-----
	0-270	9.0	2.4	50/60	1226	25	29	W,X,Y,Z
	0-270	9.0	2.4	50/60	F1226	25	29	W,X,Y,Z
	0-270	15.0	4.0	50/60	1126-2S	45	52	W,X,Y,Z
	0-270	28.0	7.5	50/60	1256	73	80	W,X,Y,Z
	0-270	28.0	7.5	50/60	F1256	74	80	W,X,Y,Z
	0-270	45.0	12.1	50/60	1156-2S	144	164	W,X,Y,Z
460	0-540	3.0	1.6	50/60	216U-2S	17	22	-----
	0-540	3.0	1.6	50/60	216-2S	18	23	-----
	0-540	9.0	4.9	50/60	1226-2S	53	60	W,X,Y,Z
	0-540	28.0	15.1	50/60	1256-2S	144	164	W,X,Y,Z
	0-540	56.0	30.2	50/60	1256-4PS	330	420	W,X,Y
	0-540	84.0	45.3	50/60	1256-6PS	500	600	W,X,Y
Three Phase	0-135	3.0	0.7	±60	*20-2D	9	15	-----
	0-135	7.5	1.8	50/60	*116U-2D	17	22	-----
	0-135	7.5	1.8	50/60	*116-2D	18	23	-----
	0-135	15.0	3.5	50/60	1126-2D	45	52	W,X,Y,Z
	0-135	45.0	10.5	50/60	1156-2D	144	164	W,X,Y,Z
	0-135	90.0	21.0	50/60	1156-4D	320	410	W,X,Y
230	0-230	3.0	1.2	±60	*201-3Y	15	24	-----
	0-270	3.0	1.4	50/60	*216U-2D	17	22	-----
	0-270	3.0	1.4	50/60	*216-2D	18	23	-----
	0-270	7.5	3.5	±60	*116U-3Y	26	36	-----
	0-270	7.5	3.5	±60	*116-3Y	27	37	-----
	0-270	9.0	4.2	50/60	1226-2D	53	60	W,X,Y,Z
	0-270	15.0	7.0	±60	1126-3Y	65	75	W,X,Y,Z
	0-270	28.0	13.1	50/60	1256-2D	144	164	W,X,Y,Z
	0-230	45.0	17.9	50/60	1156L-3Y	215	280	W,X,Y,Z
	0-270	56.0	26.2	50/60	1256-4D	320	410	W,X,Y
	0-270	84.0	39.3	50/60	1256-6D	490	590	W,X,Y
	0-230	90.0	35.8	50/60	1156L-6Y	500	600	W,X,Y
460	0-540	3.0	2.8	±60	*216U-3Y	26	36	-----
	0-540	3.0	2.8	±60	216-3Y	27	37	-----
	0-540	9.0	8.4	±60	1226-3Y	76	86	W,X,Y,Z
	0-540	28.0	26.2	±60	1256-3Y	215	280	W,X,Y,Z
	0-540	56.0	52.5	±60	1256-6Y	500	600	W,X,Y

* These units are supplied with an "L" terminal which allows connecting in the field to limit the output voltage to the applied voltage. If "L" type connection is required on other models, the "L" must be included in the type number when ordering.

† When these POWERSTATS are "L" connected so that the output voltage does not exceed the applied voltage, the frequency range is 50/60 cycles.

** When a motor-drive is required, prefix the letter "M" together with the speed designation letter to the type number. Z — 6 seconds, Y — 14 seconds, X — 19 seconds and W — 45 seconds for full range travel. Since the driving motors are frequency sensitive, be sure to specify whether 50 or 60 cycles is required. Only manually-operated unit weights are listed. For motor-drives, add 10, 11 and 14 pounds to the 116-216, 1126-1226 and 1156-1256 types, respectively.

STANDARD TYPES FOR VARIED APPLICATIONS

POWERSTAT VARIABLE TRANSFORMERS for

OIL-COOLED OPERATION



TYPE O-1126

By immersing a POWERSTAT in transformer oil, the rating above normal air operation is increased and duty in a corrosive atmosphere is possible. A standard line is offered in various ratings and sizes.

EXPLOSIVE ATMOSPHERES

TYPE X-1126

To provide safe operation in hazardous areas where a small arc of spark could cause an explosion, explosion proof POWERSTATS are available. Standard models are approved by Underwriters' Laboratories for Class 1, Group D service.



HIGH CURRENT NEEDS



2106LC

LIMITED OUTPUT RANGE

Relatively large amounts of power can be controlled by a small POWERSTAT when used in conjunction with a fixed-ratio transformer. This combination is known as a POWERSTAT Line Corrector. It can be used to correct line voltage variations to maintain a specified output voltage and to supply a limited output voltage range. A multitude of ratings are available.

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Voltage Control Apparatus

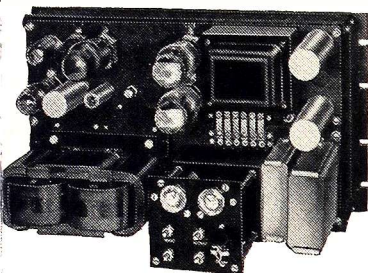
STABILINE AUTOMATIC VOLTAGE REGULATORS

maintain a constant output voltage regardless of line or load changes

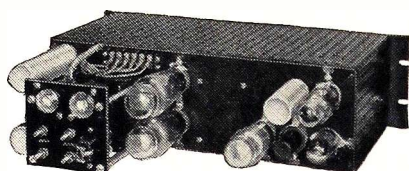
MADE IN 2 DISTINCT TYPES TO MEET YOUR NEEDS EXACTLY

TYPE IE (INSTANTANEOUS ELECTRONIC)

... for the most exacting control. Completely electronic with no moving parts. Correction is instantaneous. Waveform distortion never exceeds 3%. Output is held to within ± 0.1 per cent of nominal for wide line variations and to within ± 0.15 per cent for any load current or load power factor change from lagging .5 to leading .9. Standard types are listed below. Special units can be engineered to meet specific requirements.



TYPE IE5101R



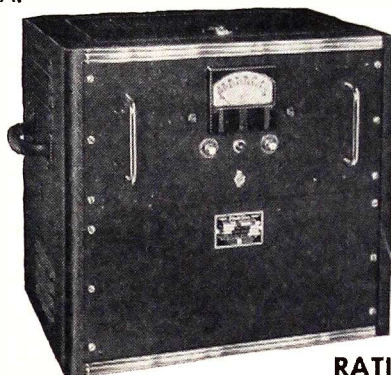
TYPE IE51002R

RATINGS TYPE IE

Input Voltage Range	Output Voltage Range	Frequency In Cycles	Load Range In Amperes	Load Power Factor Range	Rated Output KVA	Type
95-135	110-120	60 \pm 10%	0 - 2.2	.5 lagging to .9 leading	0.25	IE51002
95-135	110-120	60 \pm 10%	0 - 2.2		0.25	IE51002R
95-135	110-120	60 \pm 10%	0 - 4.5		0.5	IE51005
95-135	110-120	60 \pm 10%	0 - 4.5		0.5	IE51005R
95-135	110-120	50 \pm 10%	0 - 4.5		0.5	IEL51005
95-135	110-120	50 \pm 10%	0 - 4.5		0.5	IEL51005R
195-255	220-240	50 \pm 10%	0 - 2.2		0.5	IEL52005
195-255	220-240	50 \pm 10%	0 - 2.2		0.5	IEL52005R
95-135	110-120	60 \pm 10%	0 - 8.5		1.0	IE5101
95-135	110-120	60 \pm 10%	0 - 8.5		1.0	IE5101R
95-135	110-120	50 \pm 10%	0 - 8.5	1.0	IEL5101	
95-135	110-120	50 \pm 10%	0 - 8.5	1.0	IEL5101R	
195-255	220-240	50 \pm 10%	0 - 4.5	1.0	IEL5201	
195-255	220-240	50 \pm 10%	0 - 4.5	1.0	IEL5201R	
95-135	110-120	60 \pm 10%	0 - 22.0	2.5	IE5102	
95-135	110-120	60 \pm 10%	0 - 22.0	2.5	IE5102R	
195-255	220-240	60 \pm 10%	0 - 11.0	2.5	IE5202	
195-255	220-240	60 \pm 10%	0 - 11.0	2.5	IE5202R	
195-255	220-240	50 \pm 10%	0 - 11.0	2.5	IEL5202	
195-255	220-240	50 \pm 10%	0 - 11.0	2.5	IEL5202R	
95-135	110-120	60 \pm 10%	0 - 43.5	5.0	IE5105	
195-255	220-240	60 \pm 10%	0 - 22.0	5.0	IE5205	

TYPE EM (ELECTRO MECHANICAL)

... for controlling large industrial loads or providing zero waveform distortion. Consists of an electronic detector circuit controlling a motor-driven POWERSTAT variable transformer that feeds a buck-boost auxiliary transformer. Features include: high efficiency, insensitivity to magnitude and power factor of load and no effect on system power factor. Standard models are offered in ratings from 2 to 100 KVA.

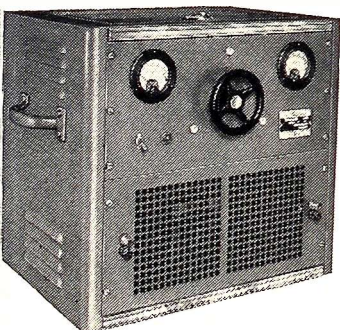


TYPE EM4115

RATINGS TYPE EM

Nominal Output Voltage	Input Voltage Range	Output Voltage Range	Output Current (Amperes)	Output KVA	Type
Single Phase 115	95-135	110-120	17.5	2.0	EM4102
			52.0	6.0	EM4106
			130.0	15.0	EM4115
230	195-255	220-240	32.5	7.5	EM4207
			120.0	27.5	EM4228
460	400-520	420-460	15.0	6.6	EM4407
			40.0	17.6	EM4418
Three Phase 230	195-255	220-240	25.0	10.0	EM6210Y
			38.0	15.0	EM6215Y
			50.0	20.0	EM6220Y
			113.0	45.0	EM6245Y
			175.0	70.0	EM6270D
460	400-520	420-460	16.0	12.5	EM6412Y
			22.0	17.5	EM6417Y
			33.0	25.0	EM6425Y
			66.0	50.0	EM6450Y
			100.0	75.0	EM6475Y
			131.0	100.0	EM64100Y

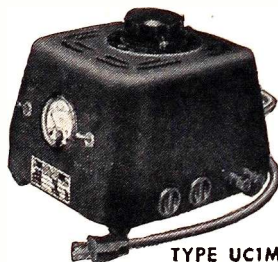
SEND FOR STABILINE BULLETIN S351



TYPE 13015

VARICELL D-C POWER SUPPLIES

... the ideal source of stabilized and regulated variable d-c voltages from a-c power lines. Output is not affected by line or load changes. Send for Bulletin VI051.



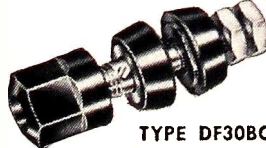
TYPE UC1M

VOLTBOX A-C POWER SUPPLIES

... are compact portable instruments that eliminate the need for collecting a variable transformer, voltmeter and connection leads for tests involving variable a-c voltages. Numerous types for every need are described in Bulletin P553G.

5-WAY BINDING POSTS

... offer permanent clamping, spade lug, clip-lead, looping and clamping, or banana plug connections. Complete insulation, 30 amp. current capacity, 1,000 volts working voltage. Available in black or red for polarity or circuit identification. Send for Bulletin BP652.



TYPE DF30BC

FOR PRODUCT LITERATURE,

WRITE TO 4000 MAE AVENUE

THE SUPERIOR ELECTRIC CO.
BRISTOL, CONNECTICUT



ALLIED'S RELAY GUIDE

ALLIED TYPE	MAXIMUM CONTACT ARRANGEMENT	COIL OPERATION CONTACT RATING AT 24-V. DC. AND 110-V. AC.	COIL OPERATION CONTACT RATING CURRENT	COIL DATA IN VOLT-AMPERES OR WATTS AC. DC.			MAX. DC VOLTS OF STANDARD COILS		MAX. RATED VOLTS OF STANDARD COILS		DIMENSIONS			ADDITIONAL FEATURES AS NOTED AT LEFT
				MINIMUM	RATED	MAXIMUM	MINIMUM	MAXIMUM	HEIGHT	WIDTH	LENGTH			
												WEIGHT IN OUNCES		
1	PK	4.P.D.T.	10	AC 2.9	5.0	11.0	4000	220	220	2-1/8	1-1/8	2-1/16	4.5	
				DC 0.8	1.5	5.0	4500	110	110					
2	AS	S.P.D.T.	5	AC 2.5	3.5	5.0	3500	230	230	1-3/16	15/16	1-5/8	2	
				DC 0.5	1.0	4.6	3485	60	60					
3	B	S.P.D.T.	1	AC 0.09	0.12	9.5	12000	110	110	1-3/4	2-3/8	2-3/4	7	
				DC 0.009	0.012	4.9	12000	12	12					
4	BK	D.P.D.T.	1	AC .190	.24	9.5	12000	150	150	1-21/32	2-5/8	2-5/8	7	
				DC .019	.024	4.9	12000	18	18					
5	BG	S.P.D.T.	2	DC .011	.05	4.8	5000	16	16	1-1/4	1-3/4	1-3/8	2-3/4	
6	BJ	D.P.D.T.	5	AC 2.8	3.5	7.3	3700	220	220	1-9/16	7/8	2-11/32	2-1/4	
				DC 1.0	2.0	5.5	3700	82	82					
7	BJU	ELECT. LATCH 4.P.D.T.	5	AC 3.6	9.0		3700	220	220	1-15/16	1-7/8	1-9/16	6-1/2	
				DC 2.8	3.5		3700	110	110					
8	BN	6.P.D.T.	10	DC 1.5	3.5	8.0	4460	125	125	2-9/16	3	1-23/32	11	
9	BO	D.P.D.T.	15	AC 3.6	4.5	10.0	2675	250	250	1-15/16	1-1/2	1-5/8	4	
				DC 1.5	2.5	5.7	5000	112	112					
10	BOY	D.P.D.T.	15	DC .50	.75	7.2	10000	87	87	1-15/16	1-1/2	1-5/8	5	
11	CNA	S.P.S.T. N.O. OR N.C.	50	AC 7.2	10.5	14.0	600	230	230	2-1/2	2	2-1/4	9-1/4	
				DC 2.0	3.5	6.5	4460	125	125					
12	DS	DIFFERENTIAL D.P.D.T.	5	DC .04	.05	5.0	8000			1-13/16	1-3/16	2-3/8	7	
13	ME	D.P.D.T.	5	DC .2	1.25	3.5	2800	60	60	1-3/16	1-3/16	1-3/8	1.5	
14	F	S.P.D.T.	2	DC .08	.20	4.5	4900	16	16	1-1/2	1-3/16	1-3/8	2	
15	SW	S.P.D.T. D.P.D.T.	2.5	DC .003	.012	4.25	13800	230	230	1-7/16	1-1/16	1-19/32	2.5	
				.012	.050									
16	HRX	3.P.D.T.	15	DC 1.5	3.0	7.0	4420	115	115	1-1/2	2-11/16	1-5/8	6-3/4	
17	PO	3 & 4.P.D.T.	15	AC 8.0	10.5	17.2	870	230	230	2-1/4	3.P.D.T. 1-5/8	1-7/8	7	
				DC 1.0	2.5	8.2	5000	112	112		4.P.D.T. 2-3/16	1-7/8	7	
18	POY	3 & 4.P.D.T.	15	DC 0.6	1.0	8.0	10000	110	110	2-1/4		1-7/8	7	
19	RA	CO-AXIAL S.P.D.T.	1.25 R.F.	DC 0.5	2.5	5.0	4100	110	110	2	2-7/8	1-3/4	4	
20	SK-C-C	D.P.D.T.	2	DC .200	2.5	4.2	4500	110	110	1-5/16	31/32	1-9/16	2.0	
21	SK-CC-C	3.P.D.T.	2	DC .400	2.5	4.2	4500	110	110	1-1/2	31/32	1-9/16	2.1	
22	SK-CC-CC	4.P.D.T.	2	DC .600	2.5	4.2	4500	110	110	1-1/2	31/32	1-9/16	2.5	
23	TSL	D.P.D.T.	2	DC 0.5	1.0	5.0	2000	55	55	1-9/16	1-3/16	1-1/16	1	
24	PB	4.P.D.T.	10	AC 4.0	6.0	8.5	380	115	115	1-13/16	1-7/16	1-1/2	4	
				DC 1.0	2.5	6.0	4800	110	110					
25	LK	6.P.D.T.	2	DC .040	.65	7.0	5200	110	110	1-5/8	1-3/32	2-7/32	4	
26	SKH	Hermetically sealed relay — data same as SK												
27	BOHO	Hermetically sealed relay — data same as BO												
28	MH18	6.P.D.T.	2	DC 1.0	3.0	6.0	6300	110	110	1-23/32	1-3/16	1-3/16	4.2	
29	MH12	4.P.D.T.	2	DC 0.8	2.5	5.0	5000	110	110	1-23/32	1-3/64	1-3/64	2.9	
30	MH6	2.P.D.T.	2	DC 0.7	2.0	4.0	2000	55	55	1-3/4	.6	.6	1.2	
31	PBHS	3.P.D.T.	10	DC 1.4	2.5	3.1	5000	110	110	2-21/32	3	3	13.0	

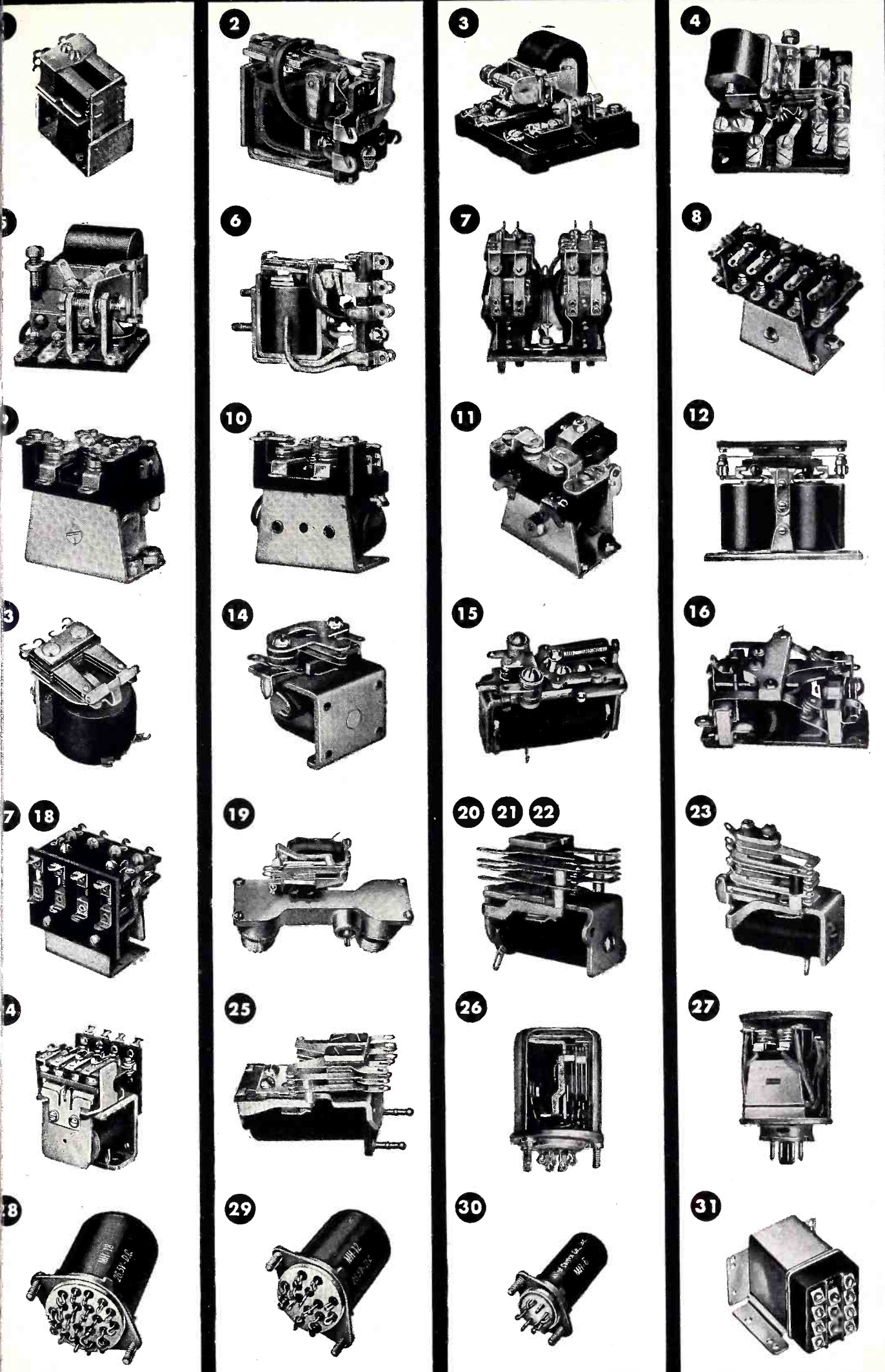
ADDITIONAL FEATURES

1. Available with Standard Ceramic Insulation.
2. Available with bakelite base and screw terminals.
3. Available hermetically sealed.
4. Available with auxiliary contacts.
5. Available for low capacity.
6. For intermittent operation only.
7. Available in double-break contact arrangement.
8. Available with ceramic insulation only.
9. Listed by Underwriters' Laboratories, Inc.
10. Designed to handle a maximum of 75 watts of radio frequency up to 150 megacycles when inserted in a properly terminated 52 ohm line.
11. MIL-R-5757A

NOTE 1.
Minimum coil data applies where shock and vibration are not a factor.

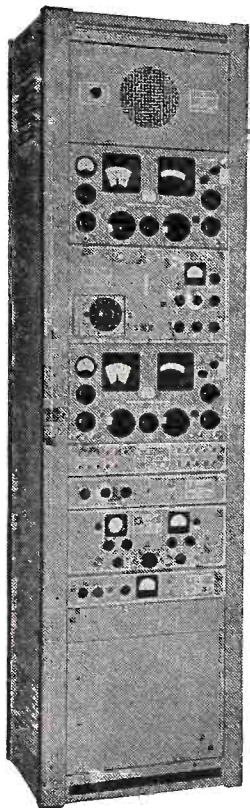
NOTE 2.
Maximum coil data based on 85°C rise above 20°C ambient for continuous operation except for mercury type relay which are based on 65°C ambient.

NOTE 3.
The following relays are AN Approved:
SKHN-CC-CC PBHN-9D
SKHW-CC-CC PBHN-12D
PBHN-6D PBHS-9D
PBHW-6D



NORTHERN RADIO COMMUNICATIONS EQUIPMENT

RADIO MULTIPLEX SYSTEMS ★ MULTI-CHANNEL TONE SYSTEMS ★ DIVERSITY RECEIVERS
 STANDARD FREQUENCY SHIFT KEYERS ★ LOW FREQUENCY SHIFT KEYERS ★ FREQUENCY
 SHIFT CONVERTERS ★ TONE FILTERS ★ TONE KEYERS ★ DEMODULATORS ★ LINE
 AMPLIFIERS ★ MASTER OSCILLATORS ★ MONITORS



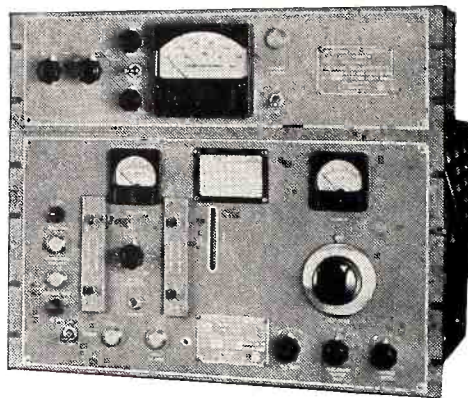
TYPE 110, MODEL 5

DUAL DIVERSITY RECEIVER

Used for dual spaced diversity reception in high speed radio tele-printer, telegraph or telephone service, using any common modulation, such as FS, CW, ICW, phone, etc. Complete receiver is housed in a rack type, fully enclosed cabinet. Provided with specially modified receivers, monitor speaker, IF monitor, master oscillator, and the necessary patching arrangements. Can be supplied with any combination of terminal equipment for reception of radio tele-printer, undulator tape and program service, or for remote use where the intelligence is transmitted via landline or UHF link.

Receiver is shown with terminal equipment as recommended for general communications usage. The units are (top to bottom) Monitor speaker, Receiver #1, Variable Master Oscillator, Receiver #2, Patching Panel, IF Monitor, Converter, Tone Keyer, Blank panels. For special features of this receiver see individual units described on the preceding pages.

FREQUENCY and SHIFT MONITOR SYSTEM



METER: TYPE 127, MODEL 2
 MONITOR: TYPE 106, MODEL 4

This system consists of a Type 106 Frequency and Shift Monitor and a Type 127 Frequency Meter. It is designed as a secondary standard to monitor the frequency and amount of shift of transmitter carrier outputs. It is particularly intended to measure the frequency shift of a mark and space (FS) signal either when setting up for traffic or under normal keying conditions.

The Monitor's stability is better than 2 cycles per megacycle over an ambient temperature range of 0-50° C—using crystals having a temperature coefficient of only 3 parts/million/degree C. Range is 2.5-30 mc with 10 crystal-controlled frequencies (separate panel trimmers for each); use of external oscillator also provided for. Frequency Shift range is 10-10,000 cps. Less than 100 millivolts RF input needed for 2 volts audio output.

The Frequency Meter is specially designed with selectable normal and fast-acting damping factors, permitting frequency measurements of signals while keying. Its accuracy is 2% of full scale for the ranges 0-200, 500, 2000, 5000, 20,000 cps.

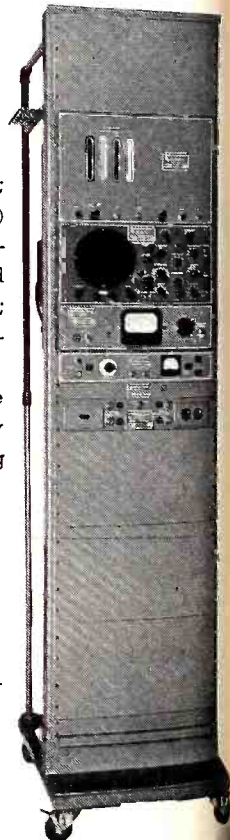
TEST BAY FOR TONE TELEGRAPH SYSTEMS

The Northern Radio Company Test Bay for Tone Telegraph Systems provides a complete terminal of test apparatus for testing, alignment and maintenance of Multi-channel Frequency Shift Telegraph Systems.

When used with such equipment, it performs the following main Functions: (1) rapid and simple precision measurements of mark, Space and Center Frequencies at both sending and receiving terminals; (2) precision Frequency adjustment of F/S Tone Keyers to specified channel Frequencies; (3) accurate tuning of F/S Converter Units; (4) rapid evaluation of signal distortion; (5) measurements of tone and telephone

line levels at both receiving and transmitting ends; (6) measurement of telephone line attenuation; (7) over-all system checks and alignment; (8) performance tests of Tone Multiplex Systems and associated equipment; (9) quick localization of systems faults; and (10), monitoring of all wave forms such as keying, keyed tone, etc.

The Test Bay consists of Electronic Square Wave Keyer (Dotter), Cathode Ray Oscilloscope, Frequency Counter, Volume Level Indicator and Rack including blank panels, patch cords and test probes.



TYPE 168

TONE CHANNELING SYSTEMS

Complete package systems of Multi-Channel Tone Equipment (both AM and Frequency Shift) are available for line or radio link systems.

FOR FULL DATA ON THE COMPLETE LINE, WRITE NOW FOR CATALOG BG-53

NORTHERN RADIO COMPANY, inc.

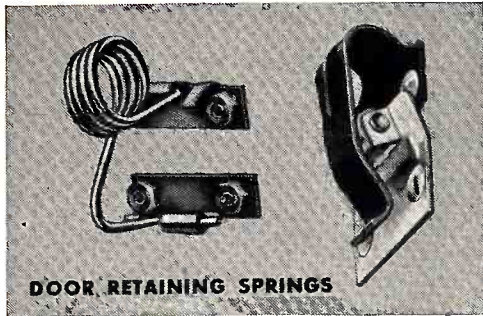
147 WEST 22ND STREET, NEW YORK 11, N. Y.

Pace-Setters in Quality
 Communication Equipment

WATKINS 9-9117



when you think of fastening
think...

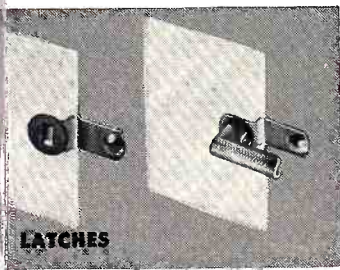


DOOR RETAINING SPRINGS

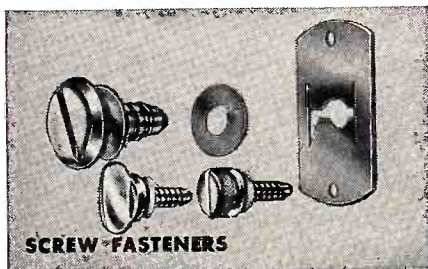
Here is help in securing the *right* fastener for your particular needs in metal-to-metal and metal-to-wood applications. SOUTHCO engineers work with you to find the standard or special fastener that means lowest overall costs.

Holding power, speed and ease of installation, elimination of special tooling, convenience of use in opening and closing applications . . . each factor involved is analyzed to assure the best fastener at lowest possible cost. When special designs are indicated, the experience and background of SOUTHCO engineers in solving thousands of fastener problems can be of special value to you.

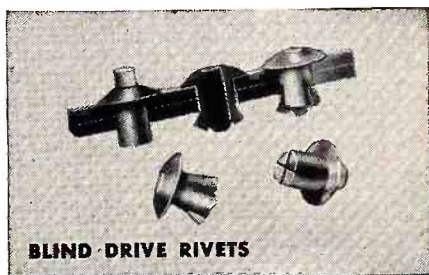
When you are faced with a fastener problem, write SOUTHCO Div., South Chester Corporation, 1417 Finance Bldg., Philadelphia 2, Pa. District Offices are located in principal cities.



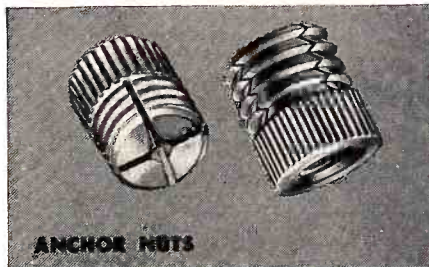
LATCHES



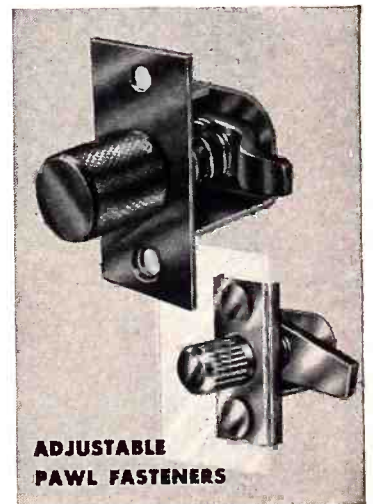
SCREW FASTENERS



BLIND DRIVE RIVETS



ANCHOR NUTS



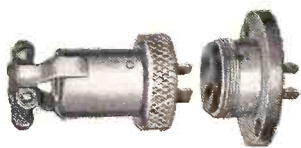
ADJUSTABLE PAWL FASTENERS

SOUTHCO

FASTENERS

OFFICES IN PRINCIPAL CITIES . . .

WHEN TWO OR MORE PARTS ARE FASTENED TOGETHER, STANDARD AND SPECIAL DESIGNS FOR IMPROVED PERFORMANCE AND LOWER PRODUCTION COSTS



JONES PLUGS AND SOCKETS

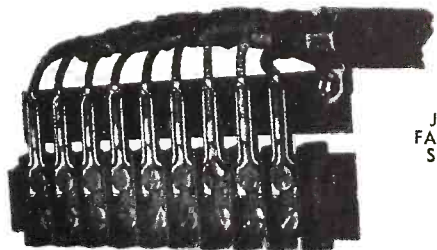
A steadily expanding variety of plugs and sockets as produced at Jones Division have a wide range of the highest quality electrical and mechanical parts to efficiently fill every need. Some indication of extensive variety of these parts is shown in the photographs on this page.

SEND FOR COMPLETE CATALOG
Cat. No. 19 will give you complete data (electrical characteristics, etc.). Your request for this catalogue or for quotes on special products will be promptly answered.

HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
1026 S. Homan Ave. • Chicago 24, Illinois



JONES BARRIER TYPE TERMINAL STRIPS



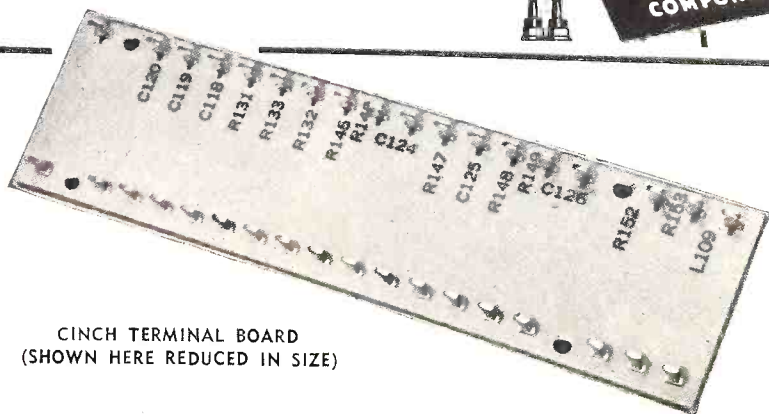
JONES FANNING STRIPS



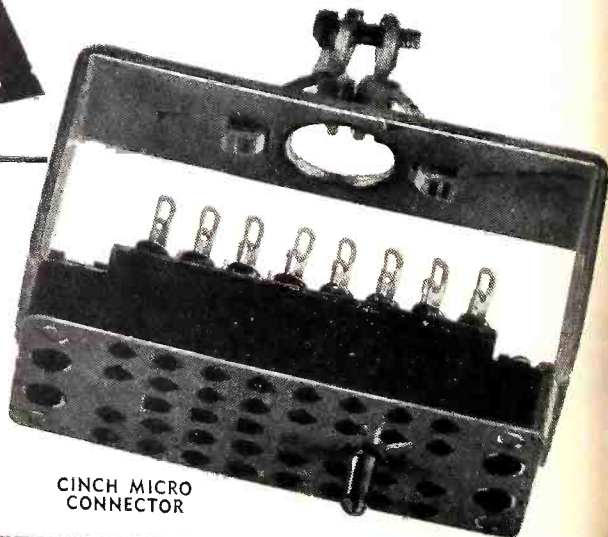
CINCH

The vast engineering behind every Cinch component concerns itself primarily with the problems of perfection, precision and performance in all phases of communications and industrial electronic equipment. Cinch small individual assemblies have always fully performed the service for which they were designed and in many cases have anticipated engineering needs of the future. So that today, judged by service, and by numbers in use as well as by testimonies of users, CINCH PARTS ARE STANDARD. They meet the demands for higher quality materials and closer tolerance in all communications and industrial control equipment.

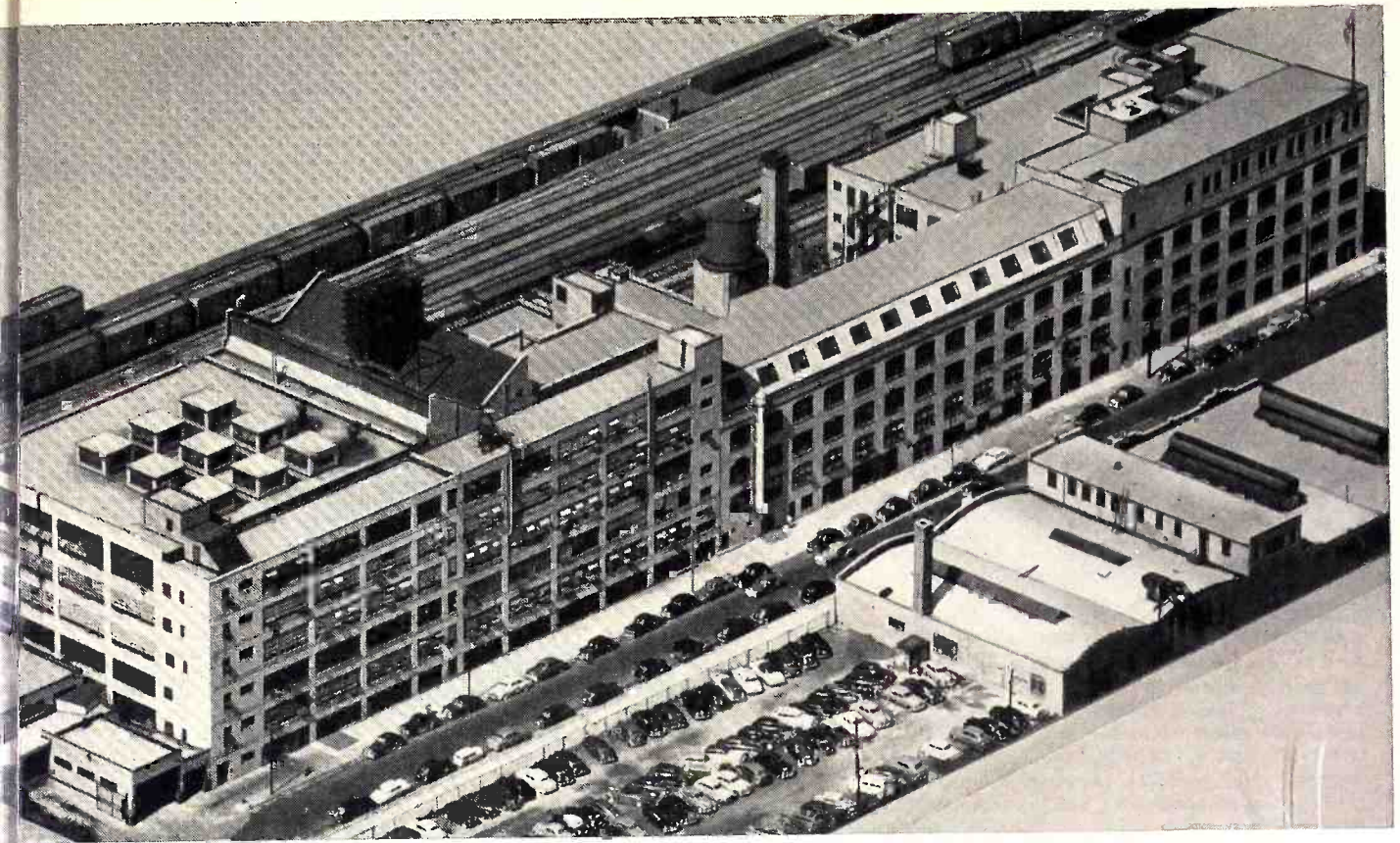
SEND FOR COMPLETE CATALOG
Cat. No. 51 contains complete data on all of the Cinch electronic components. Requests on company letterheads will be promptly answered.



CINCH TERMINAL BOARD (SHOWN HERE REDUCED IN SIZE)



CINCH MICRO CONNECTOR



Standard ELECTRONIC COMPONENTS

The list below comprises the products of both Jones and Cinch. They are indicative of their scope and also indicate the myriad of variations and redesigning that are possible with this background of production experience.

BATTERY JACKS
 PIN AND JACKS
 TERMINAL STRIPS
 MOUNTING STRIPS
 PLUGS & SOCKETS
 POSTS
 SOCKET
 CONTACTORS, MULTI CONTACT
 STRIPS, BLOCKS & BOARDS
 CAPS
 SHIELDS
 METALLICALLY SEALED TUBE
 SOCKETS

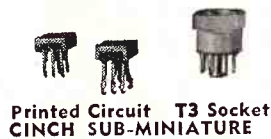
METAL STAMPINGS
 MICRO-CONNECTORS
 MOUNTING DEVICES
 PHONO TIP JACKS
 PRINTED CIRCUIT, CONNECTORS
 SHIELDS, TUBE-MINIATURE &
 NOVAL & BASES SOLDERING
 LUGS—200 VARIATIONS
 STRAP NUTS
 TRANSISTOR SOCKET
 TUBE HOLDERS—SPRING TYPE
 VIBRATOR PLUGS AND SOCKETS

ANAL ASSEMBLIES: Blocks, boards in laminated and metal, assembled with lugs, pins, screw terminals, contacts, current lugs and other hardware to specifications.

Cinch components available at leading electronic jobbers—everywhere.

CONSULT CINCH

CINCH SOCKETS:



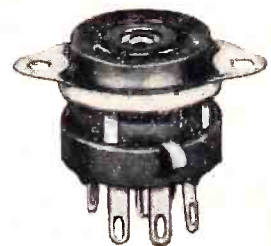
Printed Circuit T3 Socket
CINCH SUB-MINIATURE



CINCH MOLDED MINIATURE



CINCH NOVAL NINE PRONG



CINCH-ERIE PLEXICON

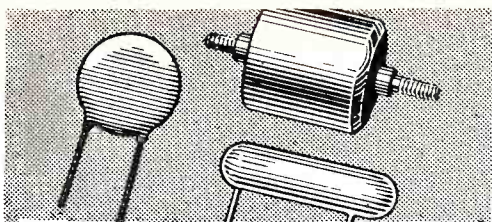
Tube (Receiver, Transmitter and Special): Battery, all types
 C-R Tube
 Crystal
 Electrolytic
 Glass Type; 4 to 7 prong laminated
 Infra-red Ray Tube
 High Altitude Airborne Types
 Kinescope; Magnal, Duodecal, Diheptal
 Loktal-Miniature-Multiplug-
 Noval-Octal (Molded bakelite, steatite, teflon, Kel-F and laminated)
 Plexicon
 Printed Circuit
 Special Sockets to Specs
 Sub-Miniature; Hearing Aid Types
 TV; 110V Circuit Breakaway
 Vibrator
 Pencil Tube Transistor
 Diode



CINCH MANUFACTURING CORPORATION

1026 South Homan Ave., Chicago 24, Illinois

Subsidiary of United-Carr Fastener Corporation, Cambridge, Mass.



HIGH-VOLTAGE CERAMIC CAPACITORS

... Result of extensive research by Hi-Q engineers to produce high-voltage units with same dependable adherence to specifications, ratings and tolerances which characterize all Hi-Q components. Special dielectric material and new designs for high working voltages in relation to size. Available in slugs, disks, plates, tubulars.

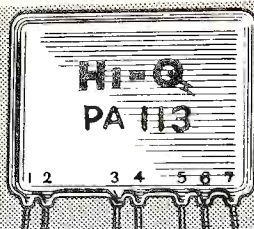
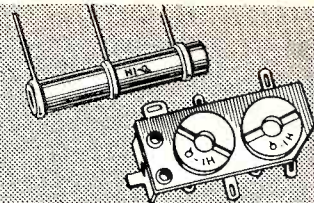
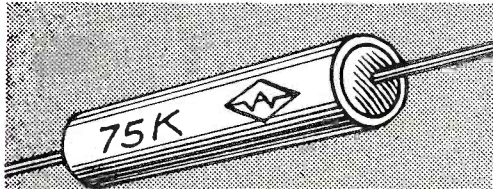


PLATE ASSEMBLIES SAVE SPACE AND LABOR

... Most versatile of electronic components. Virtually endless combinations of capacitors and resistors in single units. Limited only by "K" of material, and physical size. Contribute to dependable miniaturization. Simplify assembly. Reduce number of soldered leads.

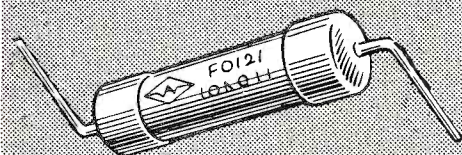


SPECIAL HI-Q COMPONENTS ... Developed to meet special needs. These special components meet all requirements as established by RTMA for class 2 ceramic dielectric capacitors. Can meet class 1 requirements if necessary. Trimmers, stand-off capacitors, feed-thru capacitors, eyelet feed-thrus, resistor-capacitor combinations, low-inductance ribbon and lug leads, etc.



CARBOFILM PRECISION RESISTORS

... Further improved by newly-developed Wilkor coating material W-65 and the ceramic hermetically-sealed cases. New material specifically developed to meet military specifications MIL-R-10509A. Units can be mounted close to other components with minimum capacitance effect. Also in uncased types.



BOROFILM PRECISION RESISTORS

... Featuring extremely low temperature coefficient of resistance. Available in resistance values up to 20,000 ohms, with temperature coefficient of 100 PPM or less. Furnished as standard coated units, and also in metal or ceramic hermetically-sealed cases. Ideal for any application requiring high-precision resistors.



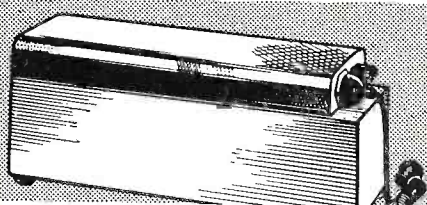
FUNCTION = FITTED

Components

A Touch of Tomorrow in the Components of Today! Embarking upon its 31st year of pioneering and producing the finest in electronic components, Aerovox presents this capsule information on some of its latest capacitor and component developments.

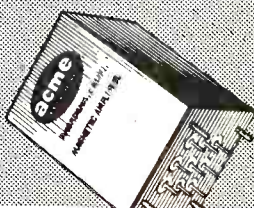
Indeed, to initiate, coordinate and check on all Aerovox products the company maintains an outstanding research and engineering development at New Bedford. Over and above the usual standard types of capacitors, resistors and certain electronic equipment, Aerovox is constantly anticipating radio-electronic trends with advanced designs, materials and production facilities.

For capacitors and resistors and electronic specialties truly *function-fitted* to your circuitry, other components and operating requirements—consult Aerovox specialists!



REGULATED DC POWER SUPPLIES

... Incorporating use of magnetic amplifier techniques — eliminating all vacuum tubes. Provides extremely dependable, trouble-free precision equipment for industrial and laboratory uses. Minimum of 20,000 hours' continuous service. Available in variety of voltages and frequencies. Output: 300 v. D.C. with plus/minus 1% regulation from 0 to 200 MA. Less than 1% ripple.



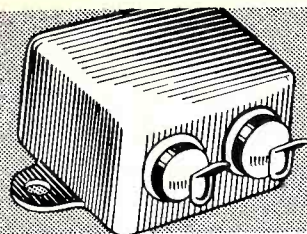
MAGNETIC AMPLIFIERS

... Acme's extensive "know-how", gained through the development of magnetic amplifiers, can provide you with the precise component to fit your exact need. Power gain as high as 10 million. Carrier operating frequencies from 60 cps to 100 kcs. Power output up to 20 watts. Input sensitivity of 0.10 microwatt. In the "instrument grade" class.

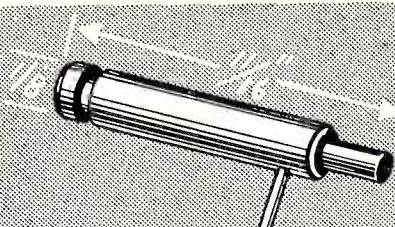


RADIO RANGE FILTERS

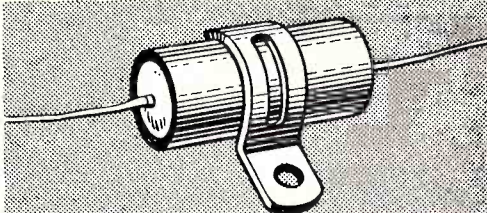
... Depending on frequency required, Acme can supply standard or miniaturized filters with either toroidal or laminated inductors. Where required, these filters can be manufactured to hold very close phase shift tolerances and close output ratings over wide temperature ratings. Acme can build the "toughest" ones!



HIGH-TEMPERATURE METALLIZED CAPACITORS . . . A major Aerovox development. Ideal for miniaturization. Units of wide usage and are giving excellent performance. Full-voltage operation up to 100° C and 125° C with voltage derating. Unique zero-setting solid dielectric — maximum shock and vibration-proof — no oil leakage.



ELECTROLYTICS FOR TRANSISTOR APPLICATIONS . . . A sub-sub-miniature electrolytic, Type HA, designed especially for new transistors. Marked size reduction — considerably smaller than any previously available commercial unit. Typical example: 6 v. 1 mfd. unit shown measures only 1/8" dia. X 1 1/16" long.



OIL-FILLED CAPACITORS FOR RUGGED SERVICE . . . Choice of impregnants that are function-fitted to operating conditions. Many different case styles—metal-case tubulars and bathtubs, round-can and rectangular-can transmitter units, large steel-case units, widest choice of mountings and terminals, etc.

We solicit your

PROBLEMS and NEEDS

To expedite the handling of inquiries and orders, you are respectfully referred to the following divisions:



ed wiring." **AEROVOX CORPORATION**, New Bedford, Mass.

All types of capacitors for all purposes — paper, electrolytic, oil-filled, molded tubulars, mica, silver-mica, metallized-paper, motor-starting, filters, etc. Also



Corporation, Olean, N.Y.

Specializing in ceramic capacitors of all types, trimmers, resistor-capacitor combinations, plate assemblies, radio chokes, etc. **HI-Q DIVISION**, Aerovox



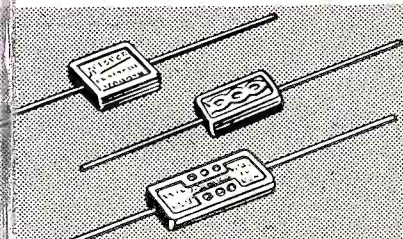
om wire-wound units, etc. **WILKOR DIVISION**, Aerovox Corporation, 2882 Detroit Ave., Cleveland 12, Ohio.

Precision resistors — Carbofilm units including hermetically-sealed types; Borofilm units for extremely low temperature coefficient of resistance;

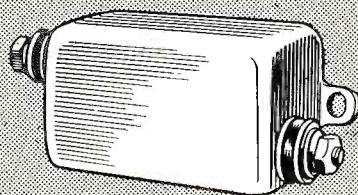


toroidal inductors, magnetic amplifiers, etc. **ACME ELECTRONICS, INC.**, 300 N. Lake Ave., Pasadena 4, Calif.

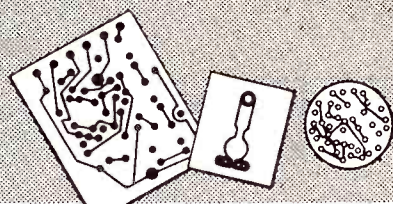
Electronic equipment specialties — wide variety of wave filters, radio range and band-pass filters, delay lines, regulated DC power supplies,



HIGH-TEMPERATURE MICA CAPACITORS . . . Suitable for operation at temperatures as high as 125° C. Increasingly used in military and special commercial applications. Available in all molded bakelite-case styles: low temperature coefficient units in the "F" characteristic of JAN is almost standard. Silver-micas also.



INTERFERENCE FILTERS . . . Latest units provide maximum attenuation from 150 KC well up into UHF range. Extra rugged, extra compact, extra efficient, by any comparison with previously-available filters. In several standard types for wide variety of uses. For extraordinary requirements, special filters can be developed and built.



"PRINTED WIRING" TO YOUR ORDER . . . Aerovox offers a radically new form of printed wiring. Employs silver as the conductor. Many distinct advantages. Essentially, this printed wiring offers fidelity of reproduction of original wiring design, with excellent adhesion of conducting material to base material. No corrosive chlorides or other harmful materials used in production.



HI-Q DIVISION
OLEAN, N. Y.

ACME ELECTRONICS, INC.
PASADENA 4, CALIF.

WILKOR DIVISION
CLEVELAND, OHIO

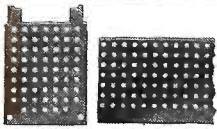
41 E. 42nd St., New York 17, N. Y. • Cable: AEROCAP, N. Y. • In Canada: AEROVOX CANADA LTD., Hamilton, Ont. JOBBER ADDRESS: 740 Belleville Ave., New Bedford, Mass.

For Basic Plug-in Unit Building Blocks, it's

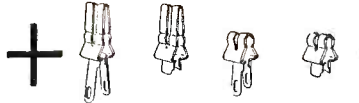
ALDEN

Now you can design your equipment for greater accessibility, simple servicing, 30-second restoration of service by plug-in replacement units, with Alden Standard Components.

ALDEN TERMINAL CARD SYSTEM to make circuitry in compact vertical planes



PREPUNCHED TERMINAL MOUNTING CARDS give tremendous flexibility to lay out almost any circuitry, for Plug-in Packages or Alden Basic Chassis.



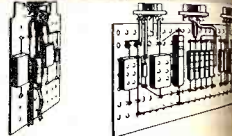
MINIATURE STAKING TERMINALS mount in any pattern on Cards. Ratchet slots hold elements for fast soldering without pliering or wrap-around.



JUMPER STRIP stakes right under Terminals, providing common circuit without soldering.



CARD-MOUNTING TUBE SOCKETS for miniature 7-pin and 9-pin, and octal tubes.



TYPICAL CIRCUITRY. Arranged for Alden "20" Package. At right, for mounting Alden Basic Chassis. See details below.

These planes become plug-in units thru ALDEN PLUG-IN PACKAGE COMPONENTS

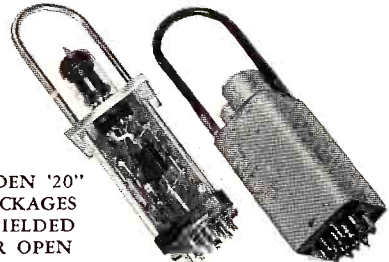
4 SIZES OF PLUG-IN PACKAGES



BASIC COMPONENTS FOR 4 SIZES OF PLUG-IN PACKAGES

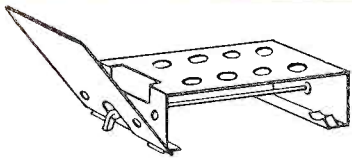
To make vertical circuitry units into compact plug-ins here are components for 7-pin, 9-pin, 11-pin and 20-pin packages. Conceived with tremendous design flexibility allowing only a few parts to accommodate tremendous variety of circuitry, both shielded and open. Bases grooved to receive up to 3 Terminal Cards. Brilliant color coding for quality appearance and quick locating to mating sockets, non-interchangeable in the "11" and "20" Series.

ALDEN "20" PACKAGES SHIELDED OR OPEN

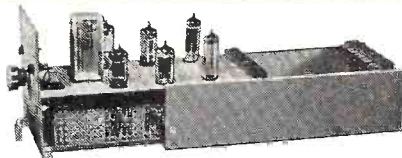


SPACE-SAVING ARRANGEMENT OF PACKAGES. SOCKETS PERMIT TIGHT PACK ARRANGEMENT.

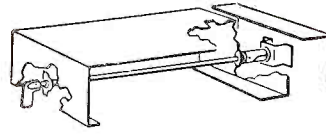
How to organize planes of circuitry as plug-in chassis, with ALDEN CHASSIS COMPONENTS



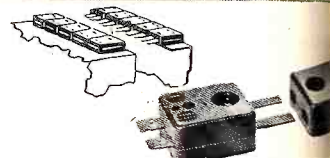
ALDEN BASIC CHASSIS
Simple U frame is open-sided. Terminal cards simply snap in. You have 100% accessibility for soldering final connections and making service checks. Hinged front panel is separable for mounting its components as separate easy sub-assembly. All production is by in-the-open sub units assembled with utmost ease.



COMPLETED CHASSIS
Here the chassis is completely assembled, fitted with slide-in Back Connectors and Serve-A-Unit Lock and inserted in rack mounting Case which has mating Back Connectors and receives the bullet nose of the Serve-A-Unit Lock which pilots, draws in, locks and ejects the Chassis. Portable Cases below receive Chassis in same manner.

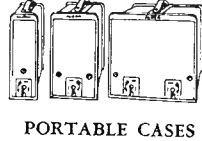
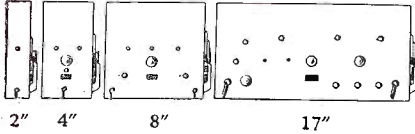


ALDEN SERVE-A-UNIT LOCK
The Serve-A-Unit Lock used in the Alden Basic Chassis pilots the chassis to accurate mating of the Back Connectors, and with a twist of the wrist draws in and locks securely in any plane and with sufficient pressure to seal compression gaskets. A reverse twist ejects chassis. This Lock is designed to make ANY plug-in unit speedily accessible for checking, servicing or replacement. Installed as shown.

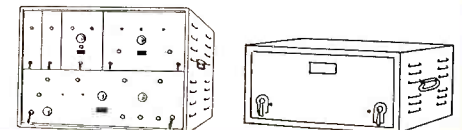


ALDEN BACK CONNECTORS
These slide-in Back Connectors mate all connections from Basic Chassis to the case and give one point of contact for all in-out leads. Mounted in orderly row on Chassis with no overlap row on Back Plate of Case, they permit direct, efficient wiring, with no congestion of critical leads. They eliminate rats-nest congestion of conventional connectors because leads are instantly accessible, and can be color coded and numbered for easy identification. Contacts can be jumped for test.

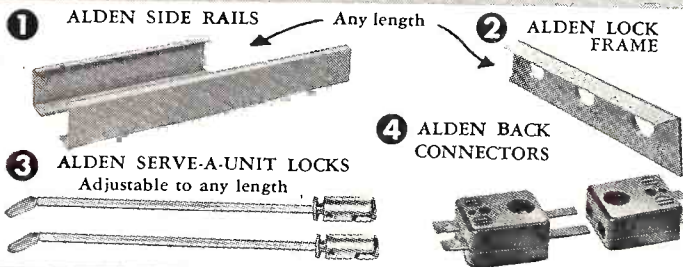
4 SIZES OF PLUG-IN CHASSIS



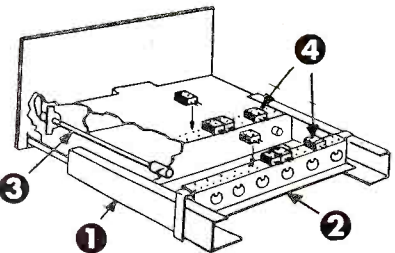
ALDEN UNI-RACKS, single or double tier, house all sizes of Alden Chassis — stack as at right.



Build your own plug-in, slide-in chassis with this ALDEN SERVE-A-UNIT KIT:



IT'S AS SIMPLE AS THIS
Arrange Alden Side Rails (1) and Alden Lock Frame (2) to suit your chassis. Alden Serve-A-Unit Locks (3) mount in your chassis to engage pre-punched holes in Alden Lock Frame (2) to pilot, draw in, lock or eject.



Arrange Alden Connectors (4) in orderly row on Alden Lock Frame. Mount mating Back Connectors on your Chassis.

— and as "Tell-tales" to instantly spot trouble in any plug-in use ALDEN SENSING ELEMENTS



Here are tiny sensing and indicating elements that really make sense. Require a minimum of panel space. Assemble by simplest production methods. Give your equipment quality appearance, safety convenience in use and servicing.



MINI-TEST POINT JACK — 110 BCS. Only 1" overall this Jack has famous Alden wrap-around contact efficient after thousands of insertions. For checking any critical voltage from front panel while in operation.



ALDEN PAN-I-LITE — 86L. Only 7/8" overall, this life makes it practical to put an indicator anywhere needed. Unbreakable 1-piece lens-light — replaceable from front. Brilliant illumination, assorted colors.



ALDEN PAN-I-LITE — 44L. Glowing signals immediately blown out with it. Serviced entirely from front of panel.

REQUEST CATALOG describing Alden's complete integrated line of components including Pre-wired Connectors, AC Outlets, completely molded with connectors, Static Magnetic Memory, Toroidal Coil Winding, Harnesses, Adapters, Test Equipment, Telegraph Keys.



ALDEN PRODUCTS CO. 112 N. Main St., Brockton 64, Mass.



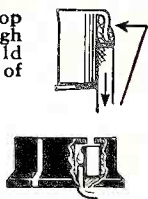
SIMPLIFY PRODUCTION WITH ALDEN PRE-WIRED CONNECTORS

If you're designing any equipment that has to be connected, manufactured in volume, standardize on this complete service of connectors designed to Cut Your Assembly Problems, Simplify Your Purchasing, Eliminate Quality Problems.

ALDEN PRE-WIRED CONNECTORS ARE UNIQUE

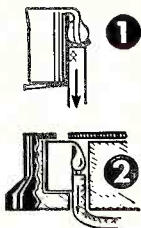
are attached to the top contact, assembled at high speed with no danger of cold joints, and minimum use of solder.

Molded insulation surrounds each contact and lead, saving space and eliminating danger of insulation peeling.




This system actually provides *strain relief* for each contact without UL knots, fishpaper or bulky clamps.

① Solder tab and bond give great strength in vertical direction. ② Molded clip pockets restrict all movement of the lead to this vertical direction so that 22-gage wire will break before the Alden Solder Tap connection gives.




See how beautifully Alden solves your connector problems by packing greater reliability into less space at lower cost!



SINGLE LEAD DISCONNECTS
Miniature hi-voltage disconnects. Phenolic or polyethylene insulation. UL safety collar.

8101M/F



Speaker Connector Series

TWO TO SEVEN LEAD
Beautiful detachable terminal connectors that do away with terminal strips, save soldering and cabling.



TWO AND THREE LEAD
Excellent miniature antenna lead-ins or signal connectors.

HA Series



Non-interchangeable Series

TWO TO ELEVEN LEAD
For cables having several connectors, prevent misconnects by specifying Alden Non-Interchangeable Connectors.

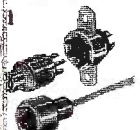


ONE TO FOUR LEAD
Compact inexpensive connector with UL safety collar for carrying AC power or signal.




MINI DUO-DECALS
Have only 3 parts: "Top Connected" contacts, leads, molding. Voltage breakdown exceeds that of tube base.

212/5 212




ONE TO FIVE LEAD
Plugs, Connectors and Sockets that answer most needs for 1 to 5 shielded leads.



C-R TUBE CONNECTORS
Quality equipment for instruments, TV, radar, Magnal, duodecal, diheptal. 100% insulation each clip and lead.

211 214

CAPS for every purpose
Completely prewired—Phenolic, Injection

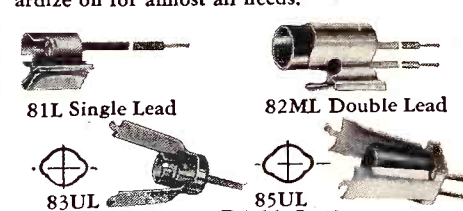


Phenolics, completely insulated for receiver, transmitter or TV tubes.

Integrally molded with insulation, lead and grid in one piece to meet any environmental and electrical conditions.

DIAL LIGHT SOCKETS

Designed for low-cost high-volume production, with tailored leads ready to drop aboard your equipment. 4 basic designs you can standardize on for almost all needs.



81L Single Lead 82ML Double Lead
83UL Single Lead 85UL Double Lead

QUALITY ELECTRICAL COMPONENTS specially designed for volume production, eliminating screwdriver and terminal posts, reducing assembly into your equipment to simple spot weld or rivet.


CONVENIENCE OUTLET



402ACE 402ACFL

World's smallest, most rugged. Complete series of tiny outlets with solder tabs or tail-on leads. Assemble by simple possible spot weld or rivet. Now you can include convenience outlets where never before possible.

SAFETY FUSEHOLDER



440-FH

1—Internal split ferrule prevents fuse breakage. 2—Ejector spring holds fuse tight and noiseless, aids ejection. 3—U-Shaped contact withdraws blown fuse.

DETACHABLE LINE CORD



202FIAC

Reduce all problems to just a tiny plug mounted in your equipment. Subtract bulky underwriters knot and cumbersome cord production problems. Add customer convenience and sales appeal to your equipment.

Advertisers: How about the NUCLEAR field?

There are a good many advertisers using this BUYERS' GUIDE who should also be advertising in NUCLEONICS.

Particularly in instrumentation and laboratory equipment, there is a cross-over of use in the electronic and in the nuclear field.

But, there is very little cross-over in the subscriber lists of the two publications — a matter of a few percentage points.

It is quite possible that you are doing an effective presentation of your products and abilities in this excellent issue, but are missing such presentation before one of the fastest growing fields in the country's history — the field of atomic energy.

The sales representatives of ELECTRONICS are also the sales representatives of NUCLEONICS. They have much evidence pointing to the opportunities in this great NEW field. Ask them to show you what your potentials can be.

NUCLEONICS

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ALDEN PRODUCTS CO. SEND FOR COMPLETE CATALOG
112 N. MAIN ST., BROCKTON 64, MASS.

VICTOREEN... RADIATION MEASURING INSTRUMENTS

VIBRATORS • VIBRATOR POWER SUPPLIES



MODEL 287 MINOMETER



MODEL 561 CHARGER



MODEL 541/A
DOSIMETER CHAMBER



MODEL 389/C THYAC



MODEL 510
ROENTGEN RATE METER



VIBRATORS



VIBRATOR
POWER SUPPLIES

MODEL 287 MINOMETER

A simple, efficient and accurate instrument, for measuring stray radiation and extremely small gamma and X-ray quantities, designed to measure exposure of medical and laboratory personnel working in the vicinity of gamma or X radiation. Equipment includes the minometer charger—reader and a 0.2 roentgen pocket ionization chamber. The chamber is similar to a fountain pen in shape and size, with a pocket clip for easy carrying. The 0.01 and 0.001r chambers can also be supplied for measuring minute amounts of stray radiation. Complete with Minometer, 0.2r pocket chamber and instruction manual. Shpg. wt. 5 lbs.

MODEL 561 CHARGER

The Model 561 Dosimeter Charger is used to charge all direct reading pocket chambers including the Model 541/A. A battery-operated unit with an internal light source and the necessary charging system. One control knob makes the charger ultra-simple to operate. Should the operator exert too much pressure on the dosimeter during charging, a spring in the charging socket yields to prevent damage to the dosimeter. Charging range 110-225V. Complete with batteries, instructions. Size 5" x 4" x 4". Shpg. wt. 5 lbs.

MODEL 541/A DOSIMETER CHAMBER

The Model 541/A 0.2 roentgen pocket chamber is direct reading. Hermetically sealed, by fused glass-to-metal seals, and mechanically rugged. A self-contained quartz fiber electrometer complete with an optical system permits reading the dosimeter at any time. The 541/A offers more information, than an indirect-reading dosimeter, because it enables the user to keep a con-

The Model 531 is designed for light-weight portable equipment requiring a low-drain high-voltage power supply. It is a shunt-driven, single-pole double-throw type. The unit is shock-mounted in sponge rubber and hermetically sealed in a steel can to preserve the precision with which it has been made and tested.

The Model 542 Vibrator is intended for very low-power, series driven applications and is normally in series with the transformer with approximately 1/2 V across the coil. This unit

The MODELS 517 and 532 are efficient, compact vibrator type power supplies designed for providing regulated high and plate voltage outputs for counter tube, photomultiplier and associated electronic circuits.

Advantages of these units include:
 High conversion efficiency
 Space and weight efficiency
 Improved performance by use of regulated output voltages
 Internal potting and hermetic sealing for reliable operation
 Minimum life of 1000 hours
 Easy mounting and replacement
 Vibrator power supplies can be made to order in many combinations of input and output voltages and currents. We invite inquiries for special requirements.

tinuous check on his accumulated dose and accordingly. Accuracy is $\pm 10\%$ with cobalt 60 and $\pm 15\%$ of the true dosage .08 MeV to 2.0 MeV.

MODEL 389C THYAC

A portable geiger counter survey meter for the laboratory and field. Three ranges of sensitivity: 0-800, 0-8000, and 0-80,000 counts per minute or, on request, 0-0.2, 0-2, and 0-20 milliroentgens per hour from Radium in 0.5 millimeters of Pt. Sensitive to beta and gamma radiation. May be used with scintillation probe. New Model 389C features off-on indicator light, improved case, circuit refinements. Indication by earphones or ratemeter. Uses a 1.3 V RM-4 mercury cell and a 4.5 V. Eveready #736 battery. A high efficiency vibrator power supply provides regulated high voltage for better accuracy. Complete with counter tube, earphones, carrying strap, batteries and instruction manual. Size 10 x 5 x 7". Wt. 5 1/2 lbs. Shpg. wt., 12 lbs.

MODEL 510 ROENTGEN RATE METER

An accurate instrument for continuously monitoring the intensity of X-ray beams or gamma radiation in roentgens per minute. An ionization chamber is used on the tip of a 12" by 1/2" diam., 1/2 lb. probe. The probe is connected to the main chassis by a 45 ft. flexible cable. A range selector switch and zero set knob are the only controls on the chassis. The selection of the four scales: 0-3, 0-10, 0-30 and 0-100 roentgens per minute permits the operator to make all readings on the upper two-thirds or more accurate portion of the meter scale. Also available with a probe extending the ranges to 1000r/min. or a sealed clinical probe. Complete with standard probe, cable, instrument, and instruction manual. Shpg. wt., 35 lbs.

VIBRATORS

is also shock-mounted in sponge rubber and hermetically sealed in a steel can.

Other vibrators, modified for particular applications, are available on special order.

SPECIFICATIONS

	Model 531	Model 542
Voltage across coil	1.5 to 1.1V	.5V
Coil current	20 ma	35 to 70 ma
Driving Power	18 to 35 milliwatts	18 to 35 milliwatts
Frequency	56 \pm 3 CPS	56 \pm 3 CPS
Temperature Range	-50 to +70° C	-50 to +70° C
Base 7 Pin Miniature tube base	RMA Type E7-1	RMA Type E7-1
Seated Height	3 inches	3 inches
Diameter	1 inch	1 inch

VIBRATOR POWER SUPPLIES

SPECIFICATIONS

	Model 517	Model 532
Input Voltage	4.5 to 3.3V	3.0 to 2.2V
Input Current	60 ma (at 4.5V)	90 ma (at 3.0V)
High Voltage Output:		
Voltage	+ 900 \pm 25V	-900 \pm 25V
Maximum Current	15 μ a	15 μ a
Regulation (over input range)	1.5%	2%
Plate Voltage Output:		
Voltage	+ 58 \pm 3V	+ 55 \pm 3V
Maximum Current	0.25 ma	0.25 ma
Regulation (over input range)	3%	3%
Battery Life (minimum continuous service)	One Eveready No. 736 80 hours or 3 type "D" cells 30 hours	4 type "D" cells 40 hours
Weight	1 lb.	1 lb.
Dimensions (including terminals)	2 1/4 x 2 1/8 x 3 3/8	1 13/16 x 2 3/8 x 2 3/8

HI-MEG RESISTORS

Victoreen Hi-Meg resistors are designed for applications requiring extreme stability and accuracy. Elements are vacuum sealed in glass envelopes then aged for lasting stability.

**Tolerance from Specified Value $\pm 10\%$
 Temperature Coefficient $\pm 0.15\%/^{\circ}\text{C}$
 Voltage Coefficient $-0.03\%/V$
 Maximum Voltage 1000 V

SPECIFICATIONS

Resistance R.T.M.A. Values . . . 10^5 to 10^{12} ohms

*Higher values to order
 **Also available within $\pm 5\%$ or $\pm 2\%$ of specified value up to 5×10^{12} ohms

VOLTAGE REGULATOR TUBES

Designed for low current voltage regulator tubes and added to an extensive series of corona regulators and negative glow discharge tubes. They are designed to stabilize a wide range of battery-operated vibrator high voltage power supplies, for reference, for voltage limiting, for control in D.C. amplifiers and for regulating potential in general.

MIL specifications on special order.

GENERAL SPECIFICATIONS

Many standard voltages: 50 to 15000 volts (nominal)
 D.C. starting voltages: About 5% above nominal
 D.C. regulated voltage tol. from nominal: Varies ± 2.0 to $\pm 5.0\%$
 Voltage regulation: $\pm 1.5\%$
 Maximum rating regulation current: Varies 100 to 250 μa (except glow tubes to 250 MA)

SUBMINIATURE ELECTROMETER AND D.C. AMPLIFIER TUBES

Types 5800 tetrode and the type 5886 pentode and 5800 mil filament power subminiature tubes are designed specifically for electrometer applications where low grid current is a paramount consideration.

Conditions where high transconductance is desired.

The type 5828 is a conventional low filament power triode.

Other subminiature types include the 5799 high vacuum half wave rectifier and the VX-10 thermal time delay relay.

SPECIFICATIONS

DESIGNATION	TYPICAL SERVICE	PLATE VOLTS (volts)	ACCEL. GRID VOLTS (volts)	CONTROL GRID VOLTS (volts)	PLATE CURRENT (μa)	CONTROL GRID CURRENT (amps)	Mu	Gm** (μmhos)
Tetrode	Electrometer	+4.5	+3.4	3.0	12	3×10^{-15}	1	15
Pentode	Electrometer	+12	+4.5	2.0	6	3×10^{-15}	—	14
(Triode Connected)	Electrometer	+10.5	—	3.0	200	2×10^{-13}	2	160
Triode	D.C. Amplifier	+4.5	—	-1.0	250	10^{-9}	17.5	450
Triode	Electrometer	+7.5	—	-1.7	100	2×10^{-14}	2.0	150

Plate current 1.25 volts at 10ma. *JAN tubes available except for 5828. **Other Gm may be obtained at the expense of higher I_c by operating at higher I_b .

COUNTER TUBES

Victoreen Counter tubes are a series of self-exciting geiger tubes designed to cover the full field of beta, gamma, X-ray and cosmic ray measurements. Some meet the needs of laboratory reliability and accuracy, others are

adapted to the more rugged requirements of portable operations.

A convenient socket, our part No. 380-26, is available for probe or chassis mounting of the IB85 and 6306 tubes.

SPECIFICATIONS

DESCRIPTION	OPERATING VOLTAGE (volts)	THRESHOLD VOLTAGE (volts)	PLATEAU LENGTH (volts)	PLATEAU SLOPE PER 100 v (%-100V)	ACTIVE LENGTH (inches)	WALL (mg-cm ²)	LIFE (counts)	TYPE BASE
Beta-Gamma Aluminum Wall	900	800	200	3	2.75	30	10^9	Coaxial A1-A2
Gamma Ray Glass Wall	300	280	60	10	2.5	200	5×10^7	Tinned Leads
Gamma Ray Glass Wall	900	850	100	10%/50v	0.5	200	10^8	Tinned Leads
Gamma Ray Glass Wall	300	275	50	30%/50v	0.5	200	5×10^7	Tinned Leads
Beta-Gamma Mica Window	1200	1100	200	5	1.5	2.0 to 2.6	10^7	Special
Beta-Gamma Bismuth Lined Aluminum Wall	900	800	150	5	2.75	30	10^8	Coaxial A1-A2

DISTRIBUTORS

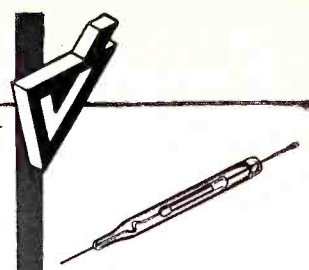
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- Brill Co., Oakland, California
- Mid-Brown, Des Moines, Iowa
- Equipment Co., Houston, Texas
- W. & W. Distributing Co., Memphis, Tennessee
- Industrial & Electronics Supply, Dallas, Texas
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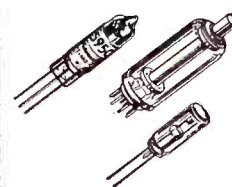
Terminal Radio Corp., New York City, New York
 Cable TERMRADIO

WEST COAST REPRESENTATIVE

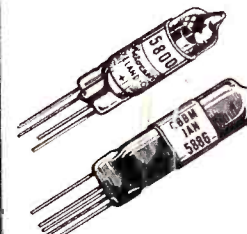
Carlton Engineering Co.
 Los Angeles-San Francisco, California



HI-MEG RESISTORS

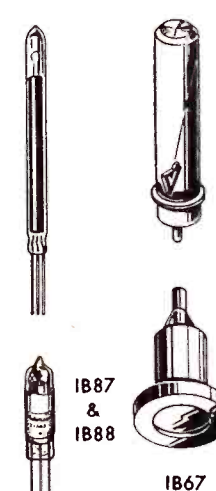


VOLTAGE REGULATORS



SUBMINIATURE ELECTROMETER AND D.C. AMPLIFIER TUBES

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COUNTER TUBES

WRITE FOR . . .

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The Victoreen Instrument Co.

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AN INVITATION

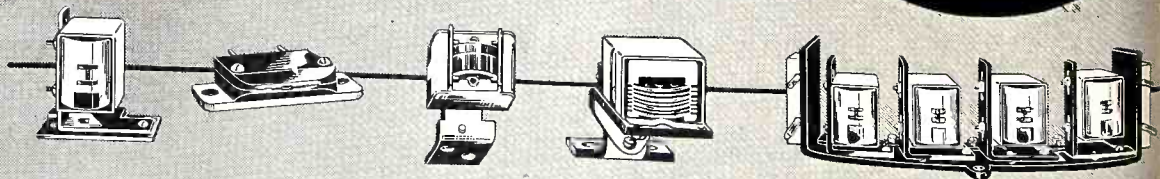
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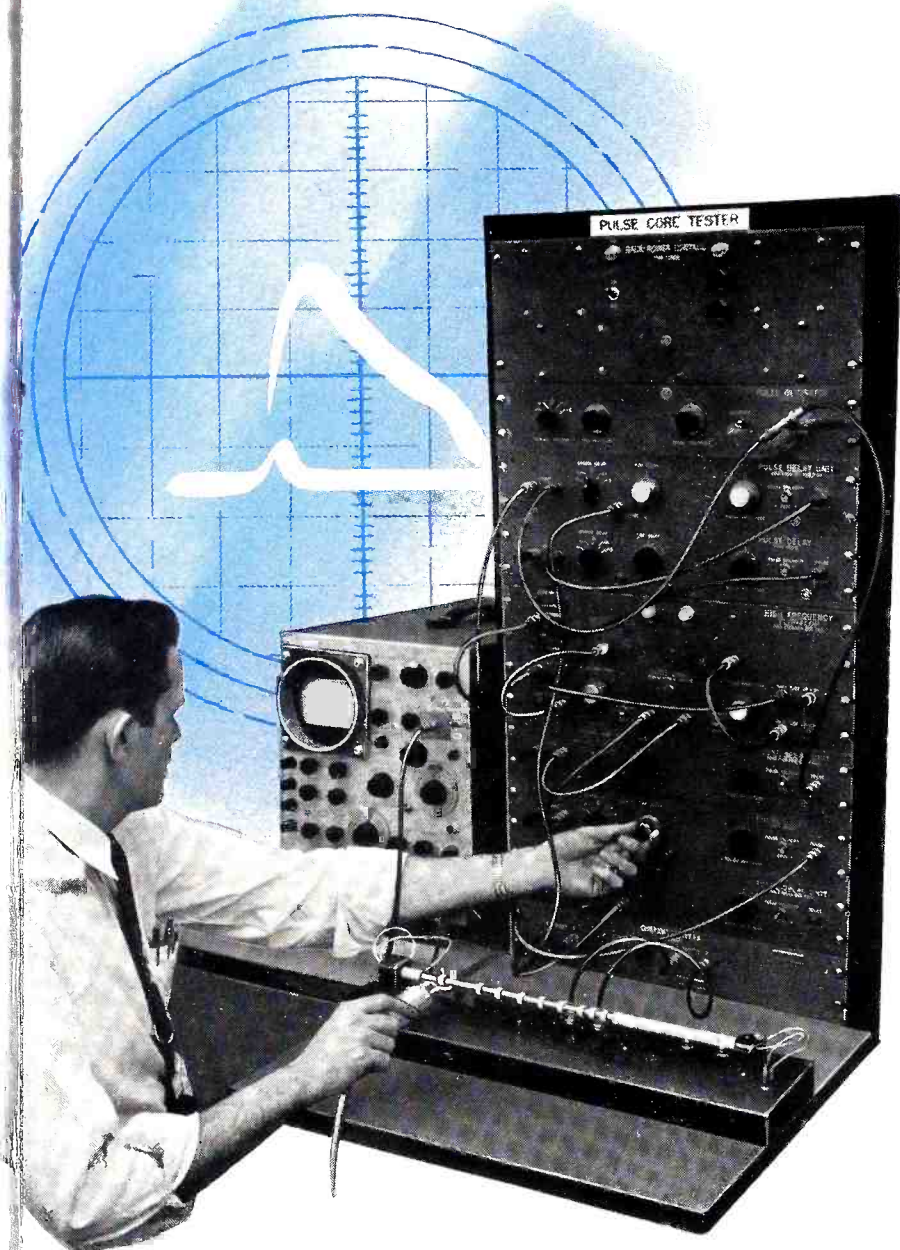
Sales Division
SHURE BROTHERS, INCORPORATED
225 W. Huron Street Chicago 10, Illinois



SHURE

"UNITIZED" PULSE CONTROL EQUIPMENT

Saves
valuable research
and testing time



Always in the past, it has been necessary to custom design pulse test equipment for each individual application—this has proved a most costly and time-consuming engineering operation. But now the major portion of this work can be eliminated through the use of Burroughs "Unitized" Pulse Control Equipment. These standardized units are complete within themselves and each performs one basic operation, such as generating, mixing, gating, counting, etc. The units can be arranged and rearranged in almost any manner necessary to simulate actual conditions of usage for the component part being tested.

AS AN EXAMPLE—MEASURING THE BEHAVIOR OF MAGNETIC CORES

Pictured here is a Burroughs Core Tester BCT-300 designed to swiftly and accurately measure the "switching time" and "squareness ratio" of toroidal cores. The unit is made up of eight standard Pulse Control units (one Low Frequency Pulse Generator 1004C, a Flip-Flop 1101C, a Coincidence Detector 1201B, and five Pulse Delay units 1301C) mounted in a rack with other accessory equipment. The

output of this unit may be observed on a standard laboratory oscilloscope. Power is supplied from a 9101C power supply.

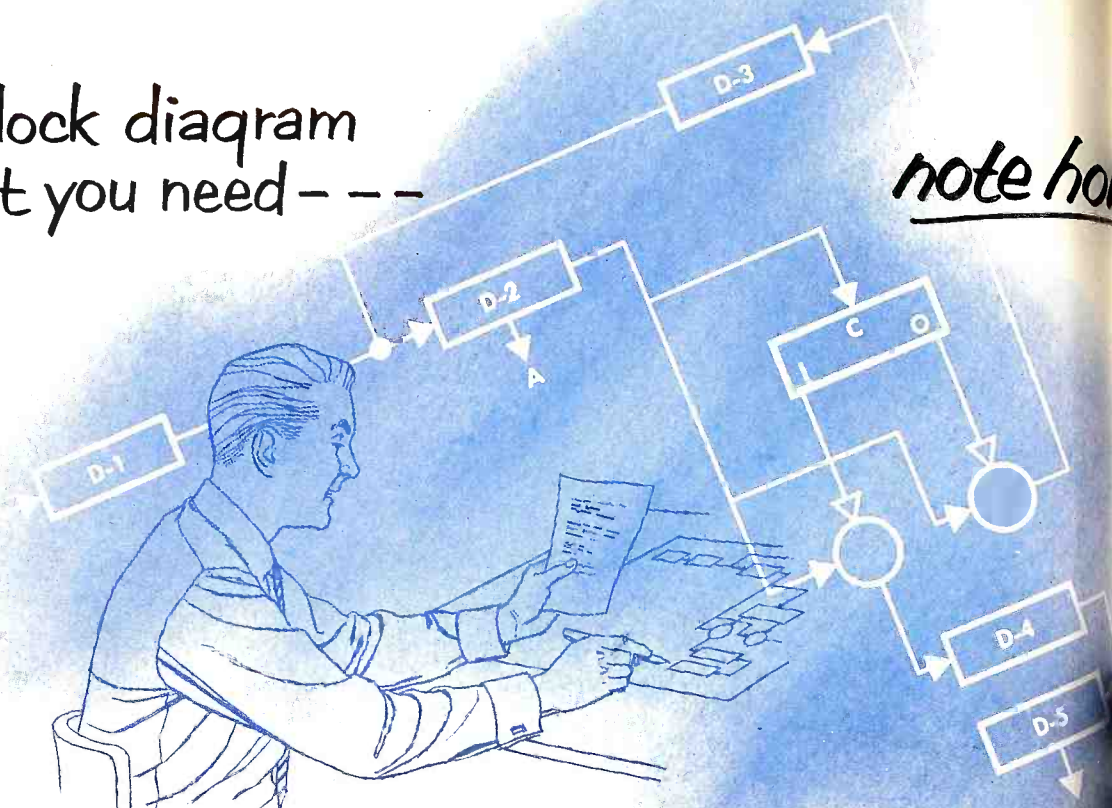
This BCT-300 is typical of the many possible applications of Burroughs "Unitized" Pulse Control Equipment. Pertinent characteristics and specifications of the individual units will be found on the following pages.

FOR APPLICATIONS
RADAR, TELEMETERING
DIGITAL COMPUTING,
TELEVISION AND
NUCLEAR PHYSICS

ELECTRONIC INSTRUMENTS DIVISION
Burroughs

Plan a block diagram
of the circuit you need - - -

note how



PULSE GENERATOR

Type 1004C — Generates 0.1 microsecond pulses at frequencies continuously variable from 15 to 650,000 cycles per second, in five overlapping bands. Output circuit is designed to match 93-ohm RG-62/U cable.

A symmetrical multivibrator is used to control the frequency. The output amplitude, which is not affected by changes in frequency, can be varied from 10 to 32 volts and the polarity of the output pulse is reversible.

Type 1002B — Generates 0.1 microsecond pulses (approx.) at frequencies continuously variable from 0.2 megacycles to 4.5 megacycles in four overlapping bands.

A calibrated, L-C controlled, sine-wave oscillator controls the frequency. The output amplitude, which is only affected by frequency changes in the ranges above 2 megacycles, can be varied from 10 to 32 volts and the polarity of the output pulse is reversible.

Type 1003A — This unit consists of three separate pulse generators mounted on a single panel, each section of which is capable of generating 0.1 microsecond pulses in three different ways.

1. Single pulse push-button operation.
2. The output pulse is generated by coincidence action of a push-button and a positive synchronizing pulse.
3. The output circuit acts as a pulse standardizing circuit when fed by external pulses. The output circuit is directly triggered by an input pulse with no push-button action.

Two inputs for each pulse generator are provided: one, "Synchronizing Input," for synchronization of push-button pulses; the other, "Low-frequency Input," for triggering the output circuit directly, without the use of the push-button. Positive pulses are available with output amplitudes adjustable from 0 to 35 volts.

PULSE GATER

Type 1501B — This unit comprises a gate generator with a manually adjustable gate length and an independent coincidence detector. The duration of a gating pulse is continuously adjustable from 0.3 micro-

seconds to 5,000 microseconds in four overlapping ranges. The Pulse Gater replaces a Pulse Delay Unit, a Flip-Flop, and a Coincidence Detector for the purpose of generating pulse trains.

COINCIDENCE DETECTOR

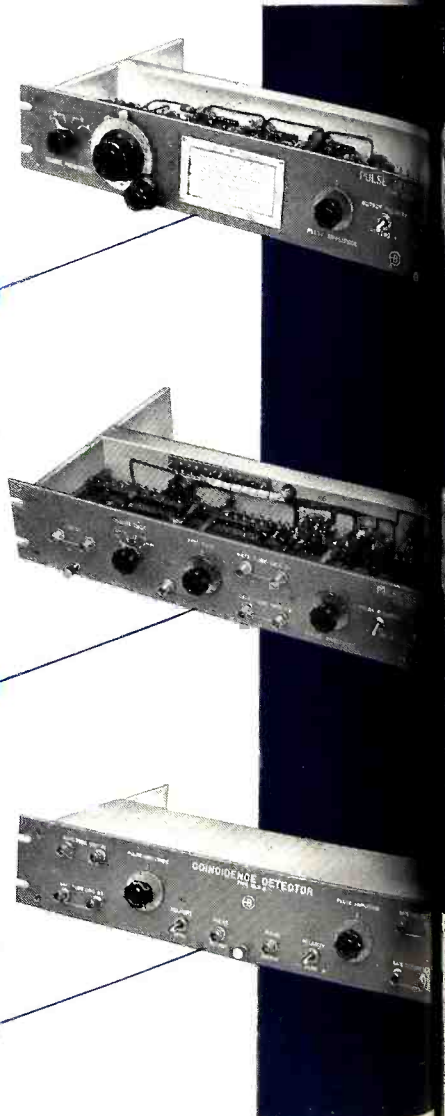
Type 1201B — Two independent coincidence detectors are mounted on one panel. These units are designed to sense coincidence between the output signal of a flip-flop and 0.1 microsecond pulses. Two inputs are provided for each unit. Grid No. 1 is designed to accept 0.1 microsecond pulses with minimum amplitudes of 13 volts. Grid No. 3 is designed to accept the output of Type 1101C flip-flop or equivalent.

is designed to sense coincidence between the output voltage levels of as many as five flip-flops.

The principal difference between this unit and the Type 1201B coincidence detector is that the Type 1201B is designed to sense coincidence between a flip-flop output and 0.1 microsecond pulses, while the Type 1202A is designed to sense coincidence between output of one flip-flop and as many as four other flip-flops.

Type 1202A — Two separate coincidence detectors are mounted on one panel. Each

As many as six inputs may be driven in parallel from a single flip-flop output.



"STANDARDIZED" PULSE CONTROL EQUIPMENT

shown here can be mounted on a 19-inch rack and arranged to fit your specific requirements

PULSE DELAY

Type 1301C—In this unit, a 0.1 microsecond input pulse triggers a single-shot multivibrator of controllable period, and a 0.1 microsecond pulse of reversible polarity is regenerated at the end of the multivibrator period. The delay of the 0.1 microsecond output pulse is continuously adjustable in five overlapping ranges from 1 microsecond to a maximum of about 80,000 microseconds.

In addition, a rectangular pulse with a duration equal to the delay period between the 0.1 microsecond input and output pulses is brought out to a jack on the front of the panel through a d-c coupled cathode

follower so that it can be used for observing the time delay oscilloscopically.

Type 1302A—This unit delays 0.1 microsecond pulses by means of a tapped delay line in 0.05 microsecond steps from 0.1 to 1.9 microseconds. Reversible output polarity of variable amplitude is also provided.

Type 1303B—This unit, which provides a fixed delay of 0.1 microsecond is designed to be connected in cascade with RG-62 U coaxial cable without mismatch. Input and output cable connectors are mounted on a flanged box $4\frac{1}{2} \times 3 \times 1\frac{3}{4}$ inches.

FLIP-FLOP

Type 1101C—The flip-flop is a bistable circuit designed specifically to provide an output voltage level to be used as a gate in coincidence circuits. The unit contains a pentode Eccles-Jordan circuit capable of being switched at rates up to 2.5 megacycles per second with 0.1 microsecond pulses.

There are three inputs—zero, one, and complement—operating with minimum am-

plitudes of 12 volts. Two output jacks marked "Zero Gate" and "One Gate" supply either 0 volts or -23 volts at an impedance level of approximately 680 ohms.

There are two neon lights on the front of the panel which indicate the position of the flip-flop. There is also a terminal block on the rear of the unit which can be used to operate indicator lights installed at a remote point for visual monitoring.

GATED CHANNEL SELECTOR

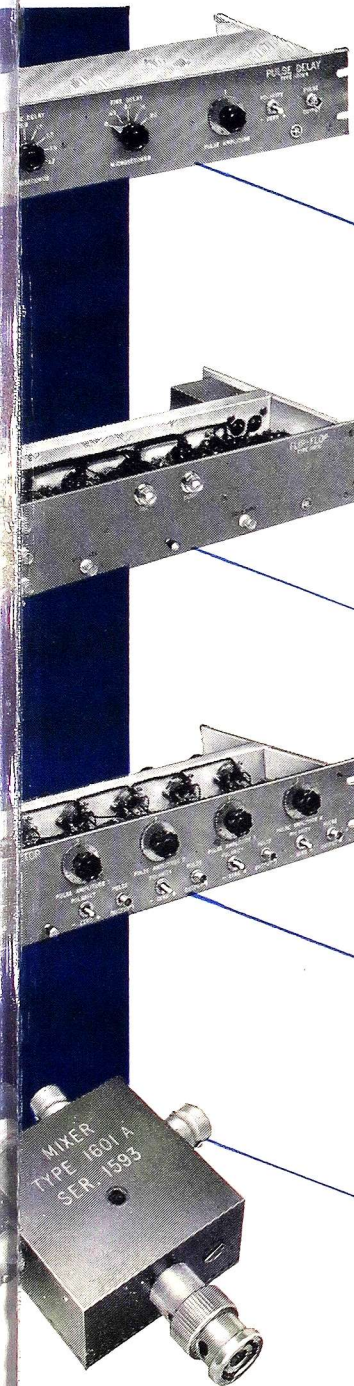
Type 1402C—This unit is designed to sense coincidence between the output signal of a flip-flop and 0.1 microsecond pulses and to feed the output to four separate jacks. The input section is similar in action to that of coincidence detector, Type 1201B. Each of the output pulse positions has its own amplitude control and three-position toggle switch which is used to select

pulse polarity or reject the output pulse. The ability of the unit to select any or all of the four output circuits in any combination permits the unit to be set up for a parallel binary code, where each output can be used to represent a single binary digit. The unit is also useful for feeding as many as four terminated lines from a single source.

MIXERS

Type 1601A—This mixer has four input positions which feed a common output through crystal diodes. Four standard input connectors and one output connector are mounted on a box $2\frac{1}{2} \times 2\frac{1}{2} \times 1$ inch.

Type 1602A—This mixer is a panel-mounted twin mixer functionally equivalent to two of Type 1601A except with five input connectors and one output connector for each mixer.

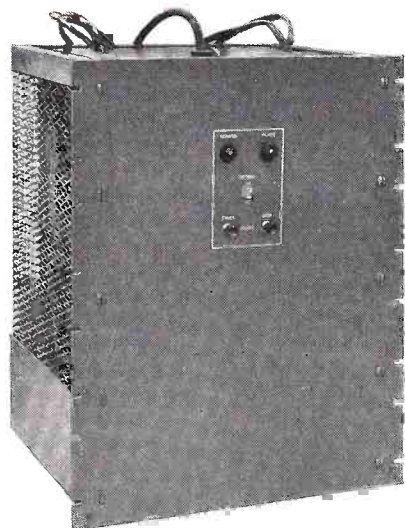


B ELECTRONIC INSTRUMENTS DIVISION
Burroughs

Burroughs Accessory

PULSE CONTROL EQUIPMENT

-necessary for fast circuit assembly



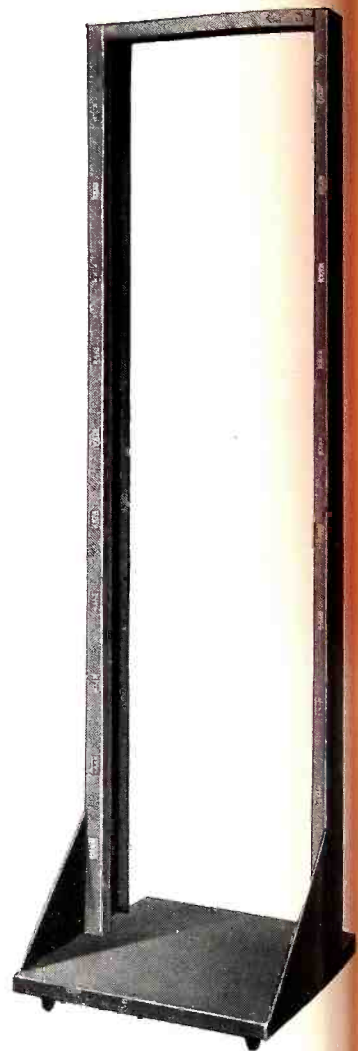
POWER SUPPLY—Type 9101C

This unit is a magnetically regulated d-c power supply providing the seven voltages necessary for the operation of several pulse generators, flip-flops, coincidence detectors, etc. Each d-c voltage is automatically regulated to within ± 1 per cent of the selected voltage for load variations from 10 per cent load to full load, and for a-c line input variations of ± 8 per cent. Two separate transformers, each with tapped primaries and two secondaries, supply a total of 50 amperes of heater current at 6.3 volts.

The unit, which is operated from a 115-volt, 60-cycle, 20-ampere single-phase power source, has each of the seven output voltages interlocked by relays, thus providing protection from loss of voltage in any of the supplies, and has fuses for over-current protection.

MOUNTING RACK—Type 7002A

This is a standard 19-inch relay rack with plug-in power outlets available along each side. Approximately 70 inches of mounting space are available. Overall dimensions of the swivel-caster unit are $73\frac{1}{4} \times 20 \times 21$. It is finished to match the remaining units in the line.



A few current users of "Unitized" Pulse Control Equipment

Massachusetts Institute of Technology
University of Michigan
Consolidated Engineering Corporation
National Union Radio Corporation
The Catholic University of America
Stanford Research Institute
Magnetics Research Company

Originally created to speed up and simplify the building of electronic test equipment at the Burroughs Research Center, "Unitized" Pulse Control Equipment is now being used by many leading organizations in electronic research.

More than 500 of these pulse control panels were used in the construction of the high speed digital computer now in operation at the Burroughs Research Center. They represent the primary reason why it was possible to complete this unique machine in only nine months.

Incidentally, the services of the Burroughs computer are now available, on a fee basis, to interested organizations, both

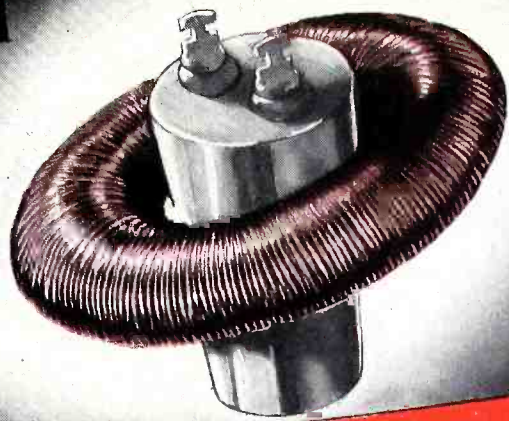
public and private. Typical computer users and their solved problems are: Westinghouse Aviation Gas Turbine Division — Turbojet engine design and performance calculations. Philco — Antenna calculation. Bell and Howell — Optical ray tracing. Hydrocarbon Research, Inc. — Stress analysis of pipe. Roger Bellows & Associates — Correlation of psychological tests on personnel.

For full information and consultation regarding Burroughs "Unitized" Pulse Control Equipment, the Burroughs Digital Computer, or other problems related to electronics or magnetics, call or write Department 12, Electronic Instruments Division, Burroughs Research Center, 511 North Broad St., Philadelphia 23, Pa.

B ELECTRONIC INSTRUMENTS DIVISION
Burroughs

QUALITY + PERFORMANCE

Burnell meets exacting design requirements in Toroids and Filter applications



PARTIAL LISTING OF BURNELL TOROIDAL COILS

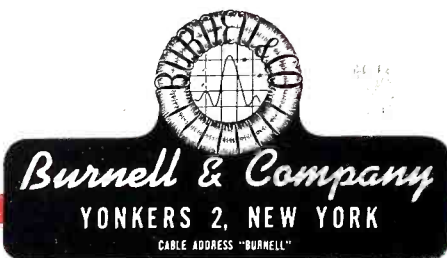
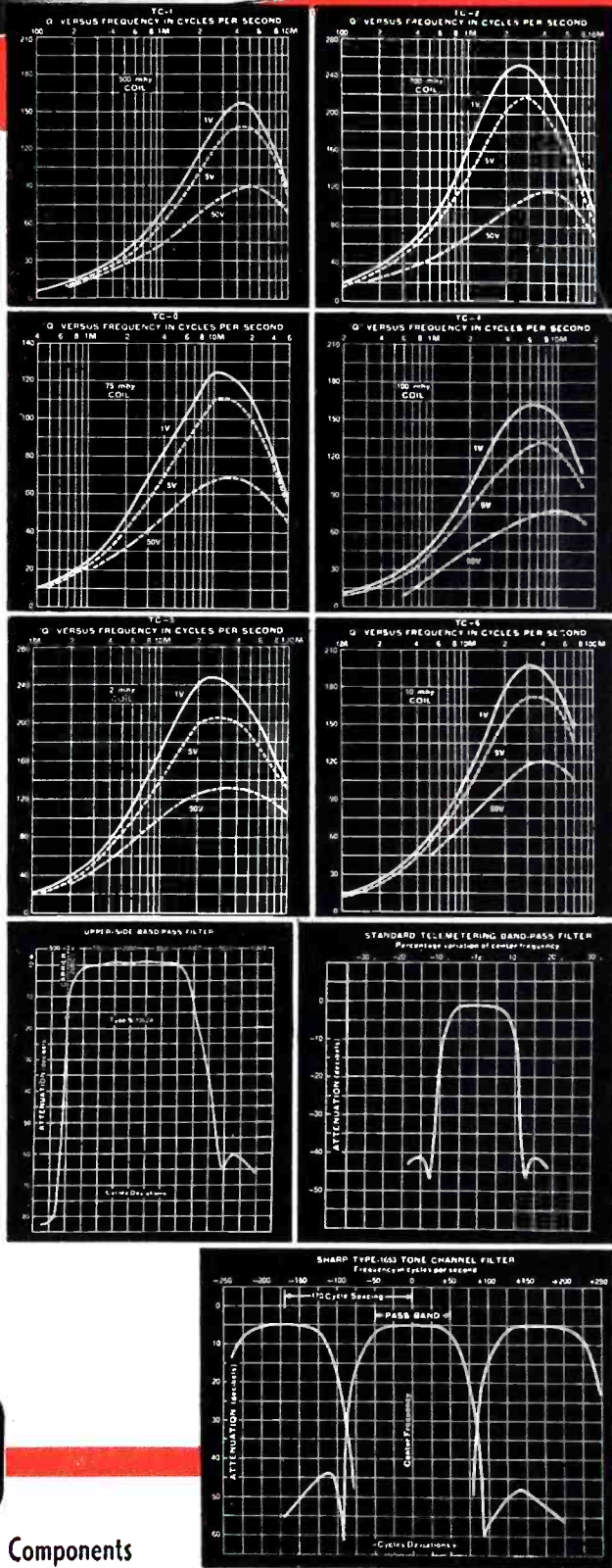
- TC-1** The "work horse" of toroids, nominal in size and weight with a high Q over a wide frequency range available in any inductance up to 15 HYS.
- TC-2** Most widely used in applications below 2500 cycles. Available in any inductance up to 150 HYS. Molybdenum core permeability 125.
- TC-0** The "Wedding Ring", most popular of all sub-miniature Toroids for aircraft and guided missiles filters available in any value up to 4 HYS.
- TC-4** At frequencies above 1000 cycles Q is only slightly less than TC-1. Available in any inductance up to 10 HYS. Core permeability 125.
- TC-5** Same size as the TC-4 but wound on a core with a permeability of 60 with inductance range of .5 MHYS to 500 MHYS. Also available in temperature stabilized type.
- TC-6** Similar to TC-0 and widely used between 20 KC and 100 KC with highest efficiency obtained at inductances below 50 MHYS.

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BURNELL & COMPANY ANNOUNCES THE DEVELOPMENT OF A NEW SERIES OF FILTERS FOR COMMERCIAL SINGLE SIDE BAND RECEIVING EQUIPMENT. FOR MOST APPLICATIONS THESE FILTERS CAN REPLACE THE MORE EXPENSIVE AND HARD TO GET CRYSTAL FILTERS. THESE FILTERS RESULT FROM A NEW APPROACH WHICH EMPLOYS A 25 KC I.F. SYSTEM. BROCHURE AVAILABLE FOR DETAILED INFORMATION.

TONE CHANNEL FILTERS for multiplex telegraph receiving and transmitting systems are available in a variety of band widths and standard channel spacings, at all frequencies from 425 cycles to 3825 cycles.

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Model 200

For nuclear pulse work, radar, TV, wide band amplifiers and in the design, calibration, and servicing of fast electronic systems.

NOW—New Square Pulse Generators with a rise time of one millimicrosecond (10^{-9} seconds) and a pulse width which can be varied from one millimicrosecond to several microseconds is commercially available. Positive and negative pulses of 100 volts maximum amplitude are generated; the pulse amplitude can be varied from 100 volts to 0.006 volts in 1 db steps. The output impedance is matched to the common impedance coaxial cables in use.

MODEL 100—Single pulse output

MODEL 200—Double pulse output—

(each pulse may be individually attenuated and delayed)

MODEL 300—Three or more pulse outputs

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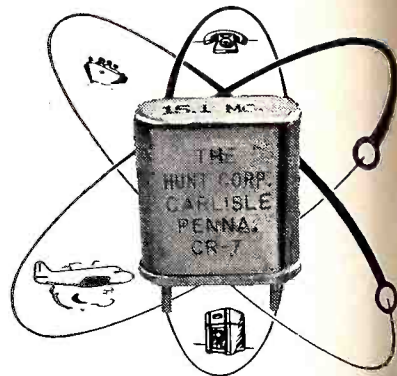
Sales and Business Office
25 West 43rd Street
New York 36, N. Y.

Telephone: Longacre 4-2265

Engineering Division
42-19 27th Street
Long Island City 1, N. Y.

Telephone: Stillwell 4-6389

STABILITY HUNT CR-7 CRYSTAL



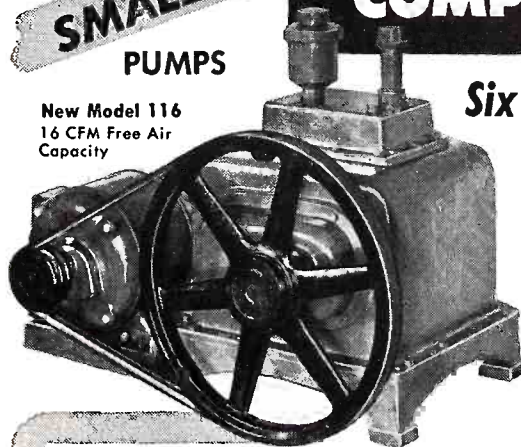
Miniature Type CR-7 Crystal Unit

(Illustration is actual size)

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New Model 116
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ELECTRONICS, NUCLEONICS AND RESEARCH FOR OVER A QUARTER CENTURY

a plus feature

Immediately following the
Product Listings in the
DIRECTORY SECTION

of this Issue
is a list of more than

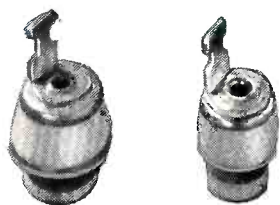
2500

TRADE NAMES

of electronic and
allied products.

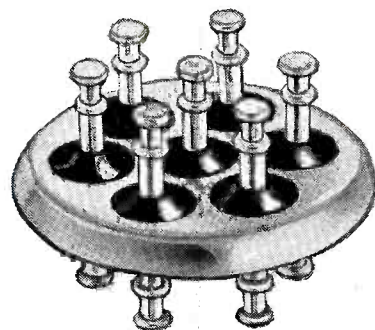
They are intended for
your use in determining
the manufacturer's name
when only
a trade name is known.

SEE SEALTRON FOR SEALS



GLASS-TO-METAL HERMETIC SEALS—

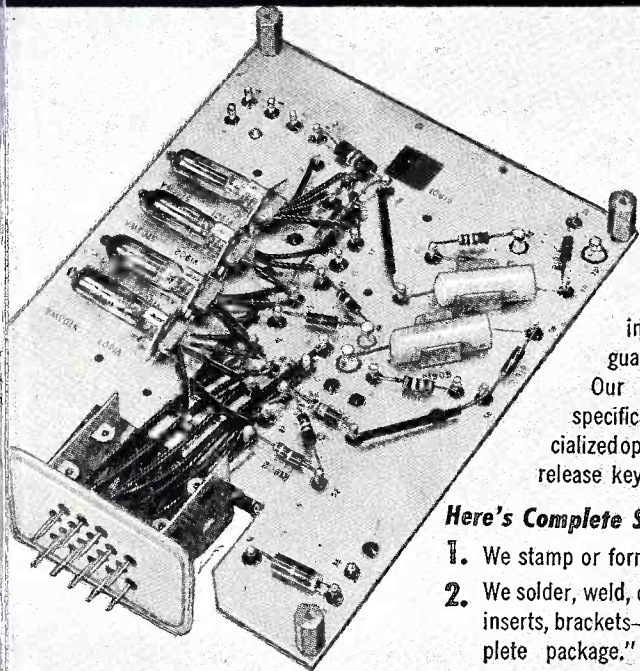
World's most complete line—over 1600 types and sizes, some small enough to be mounted on $\frac{1}{8}$ " centers. Protect vital electrical assemblies from moisture, atmospheric changes, corrosion, dirt, leakage. Also used as feed-through and stand-off terminals.



MULTIPLE HEADERS—

610 types always available—wide range of styles, shapes, pin arrangements. Can be incorporated into any panel or chassis requiring multiple connections. Fit standard receptacles. If required our engineers will design and build specially.

SEE SEALTRON SEAL-SERVICE

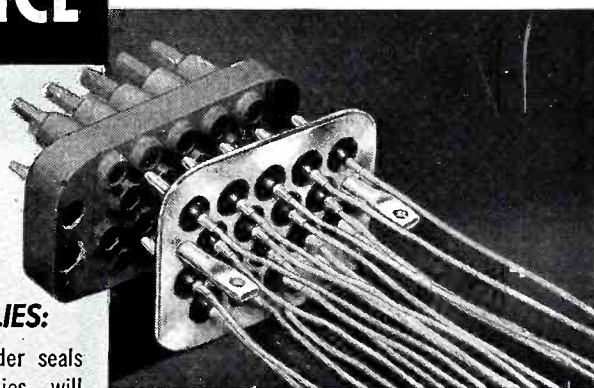


SEAL ASSEMBLIES:

Sealtron will solder seals into your assemblies, will guarantee hermetic perfection. Our technicians build to your specifications—eliminate your specialized operations, cut down overhead, release key personnel for other work.

Here's Complete Seal Assembly Service—

1. We stamp or form brackets and panels.
2. We solder, weld, or braze seals. Mount studs, inserts, brackets—all components—into complete package." Ready-to-use.
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FLEXIBLE LEAD WIRES BUILT INTO MULTIPLE HEADERS

Sealtron welds flexible lead wires right into multiple headers. Eliminates difficult soldering in "close quarters"—saves space. Sealtron "Built-in" leads meet AN specifications, eliminate space-taking mechanical attachments required with soft-soldered leads, takes up as little as $\frac{3}{16}$ " on back of panel.

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Lucille

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THE SEALTRON COMPANY

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COIL WINDING EQUIPMENT?...

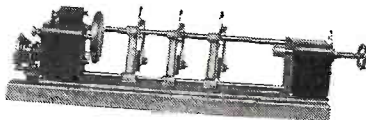
for production & development

We have them all!

TRANSFORMER WINDERS

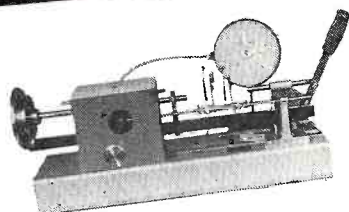


MODEL AL

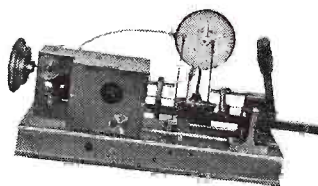


MODEL BM

LATTICE & PI WINDERS

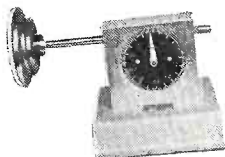


MODEL W



MODEL WX

HAND WINDERS

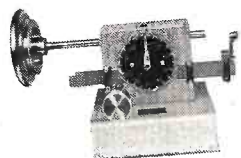


MODEL A

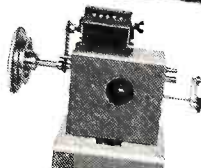


MODEL L

SPACE AND BOBBIN WINDERS



MODEL B



MODEL CS

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TRANSFORMERS & INSTRUMENTS

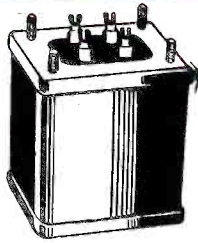
"PRODUCTS OF EXTENSIVE RESEARCH"



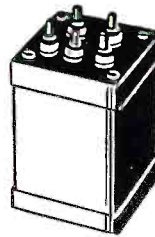
NO. 1040 VACUUM
TUBE VOLTMETER



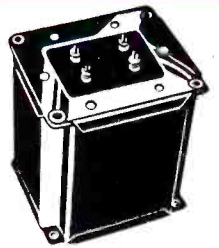
NO. 1030 LOW
FREQUENCY "Q"
INDICATOR



HIGH FIDELITY
TRANSFORMERS
1/2 DB 20 CPS TO 30 KC.



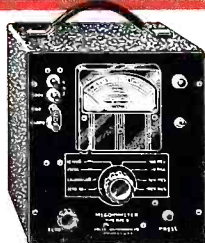
DISCRIMINATORS
10 CPS TO 1 MC



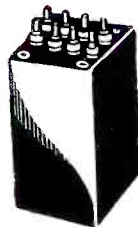
COMMERCIAL
COMPONENTS
QUALITY — PRICE
DEPENDABILITY — PRICE



NO. 1140 NULL
DETECTOR
COMPLETE WITH
SELECTIVE CIRCUITS



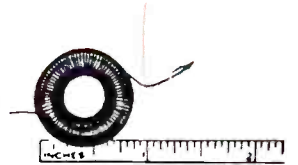
NO. 1020B MEGOHMMETER
2,000,000 MEGOHMS
DIRECT READING



HERMETICALLY
SEALED COMPONENTS
TO MEET MIL-T-27 SPECS.



TOROIDAL INDUCTORS
60 CPS TO 1 MC



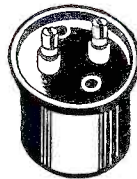
MINIATURE INDUCTORS
1000 CPS TO 100 KC



NO. 1210 NULL
DETECTOR & VACUUM
TUBE VOLTMETER



DECADE INDUCTORS
30 CPS TO 300 KC



SUB-MINIATURE
HERMETICALLY SEALED
TOROIDAL INDUCTORS



SUB-MINIATURE
HERMETICALLY SEALED
COMMUNICATION
COMPONENTS



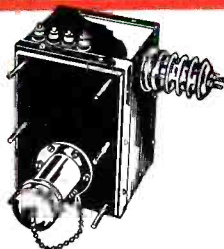
SLUG TUNED
COMPONENTS



NO. 1150 UNIVERSAL
BRIDGE
BRIDGES IN ONE
UNIT



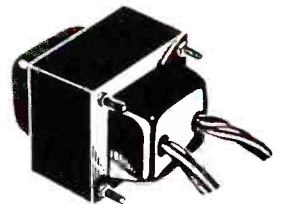
NO. 1010 COMPARISON
BRIDGE
FAST, ACCURATE,
RELIABLE



PULSE
MODULATORS



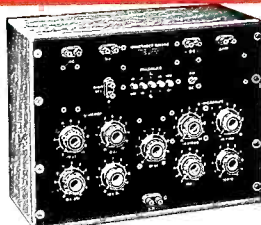
PULSE TRANSFORMERS
FROM WATTS TO
MEGAWATTS



POWER
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RUGGED, DEPENDABLE,
INEXPENSIVE.



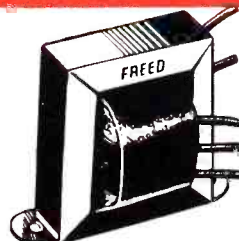
NO. 1100 D.C. SUPPLY
CURRENT UP TO
500 MA.



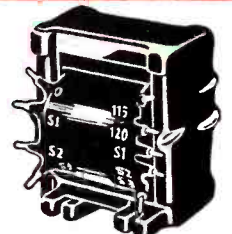
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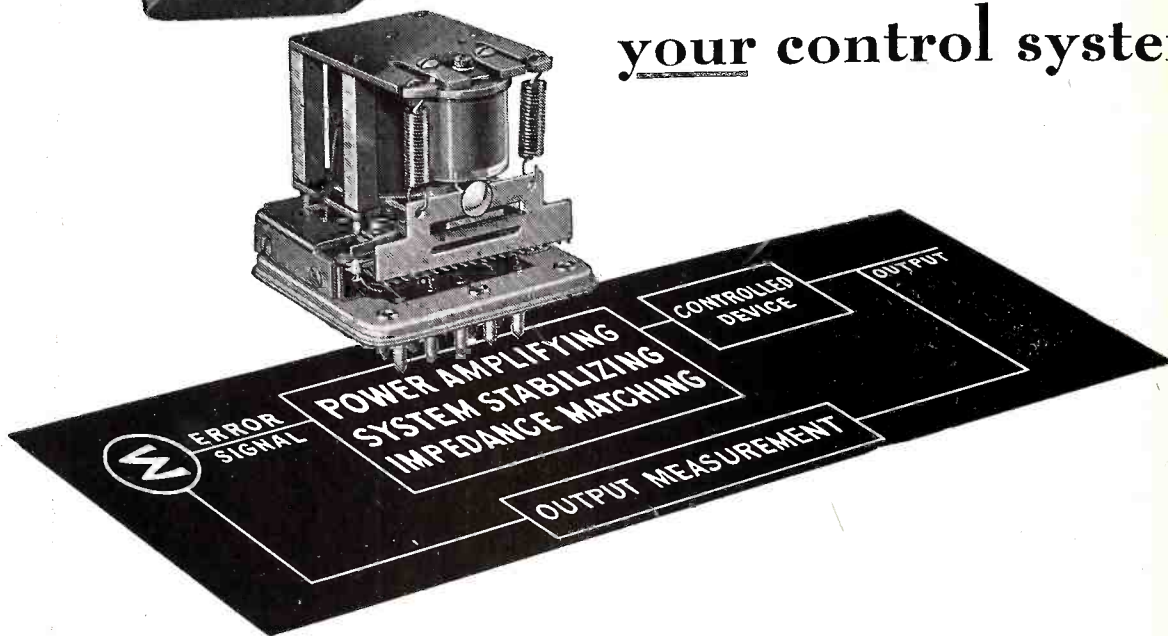
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7 Reasons why Regohm is a natural for your control system



This compact, electro-mechanical controller provides sensitivity, speed of response and system stabilization under severe operating conditions. Its design and operating features have made Regohm useful for automatic control systems in which heavier, more expensive and complex, but less accurate equipment had previously been the only available solution.

① SMALL SIZE • Regohm is a compact, plug-in device; lightweight, extremely rugged and position-free. The unit's small size does not limit its power-handling capacity. This makes Regohm a "natural" where economy of space and weight are your major considerations.

② POWER AMPLIFYING • Regohm is a high-gain electro-mechanical power amplifier. Milliwatt variations in signal energy can control energy changes millions of times greater.

③ IMPEDANCE MATCHING • Signal and controlled circuits are isolated, both electrically and structurally. Signal coils may have ratings from 0.01 to 350 amperes. Controlled resistors on a panel in which Regohm is plugged, can have values from zero to infinity, depending on the controlled system.

④ SYSTEM STABILIZING • A thoroughly reliable, sturdy dash-pot aids in system damping. It can easily and readily be adjusted over a wide range to match the dynamic character-


istics of the Regohm to those of your present system.

⑤ ANALYTICALLY DEFINABLE • The response of Regohm is independent of the rest of the servo system. Its response characteristic can be expressed in terms of conventional "transfer functions." Regohm acts as an integrating error-rate proportional controller. No appreciable steady-state error can occur. Regohm's effect can be calculated in advance, simplifying design and facilitating prediction of performance.

⑥ CONTINUOUS CONTROL • In "closed loop" systems a high-speed averaging effect occurs as Regohm's armature oscillates over a small amplitude. This provides intermediate values between step resistances and results in continuous, stepless control in systems operating at power frequencies and below.

⑦ LONG LIFE • In properly engineered installations, Regohm's life is measured in years. Plug-in feature simplifies replacement and maintenance—there are no parts to renew or lubricate. Shelf life is substantially unlimited.

Our engineering and research facilities can help you apply Regohm to your servo system or regulator problem. Write for Bulletin 505.00, containing a complete discussion of Regohm's characteristics and applications. Address Dept. E, ELECTRIC REGULATOR CORP., Norwalk, Conn.



CONTROL COMPONENT IN: Servo systems • battery chargers • airborne controls • portable and stationary generators • marine radar • inverters • locomotive braking systems • mobile telephones • guided missiles • signal and alarm systems • telephone central station equipment • magnetic clutches • railroad communication systems.

Electronic
gearing

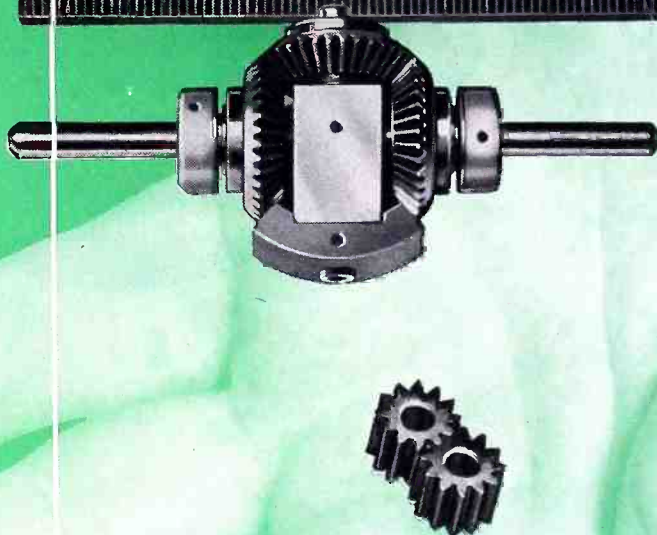
Electronic Gears and Gear Drives by



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Do you have a problem involving the design of gears or gear drives for electronic application? For operation of servo-mechanisms, computers, adjustment of radar or other antenna systems, for auto-tune transmitters? Do you require "just ordinary" gearing or extremely accurate "precision class" gears?

Whatever your need, whatever the type gear or gear train, you will find the engineering assistance and complete facilities available at Western Gear Works. Specialists who know and understand your problems are ready to go to work for you. Your inquiries are invited; write, wire or telephone us now, at Western Gear Works, Executive Offices, Post Office Box 182, Lynwood (Los Angeles County), California, Telephone NEVada 6-2161.



Illustrated are a few typical examples of electronic gearing designed for customer requirements.

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WESTERN GEAR WORKS

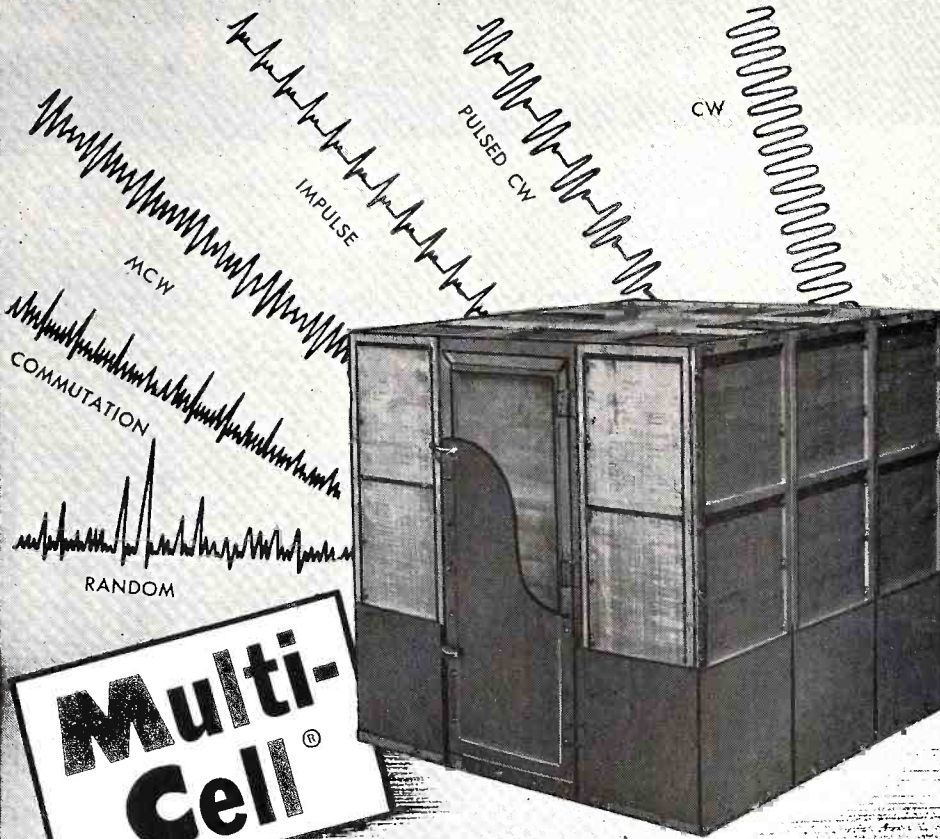


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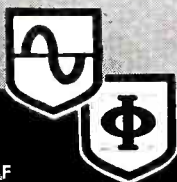
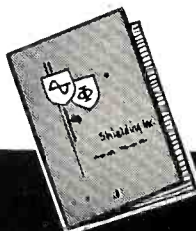
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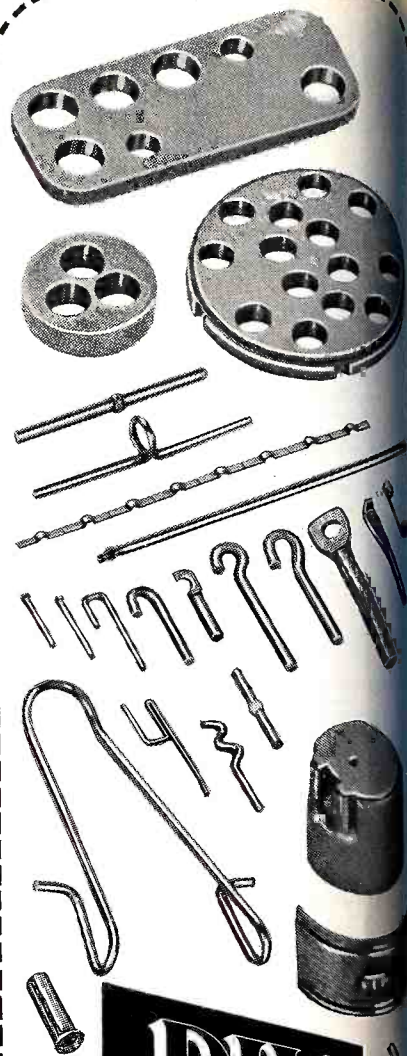


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A NEW LINE OF STANDARD TYPES

- Designed to MIL-T-27 specifications
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- Core and coil securely anchored to mounting studs
- High Vacuum impregnated

These types have been selected to provide standard, readily available components of the highest quality, including the specific types chosen by ASES for universal military use.

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1½", 2½", 3½" and 4½" sizes.

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¼ to 2 watts HERMETICALLY SEALED in glass (the CA-H pictured here) and in a Specification Series (the CA-4R) which exceeds MIL-R-10509 spec. for fixed, accurate resistors.

For equipment subject to extremes of temperature, for high frequency applications and for closely matched units, these conservatively rated resistors provide the utmost in stability, precision and dependability.

"CARB-OHMS"
deposited carbon resistors



100% inspection on each "CARB-OHM" assures conformance to specifications and ratings.

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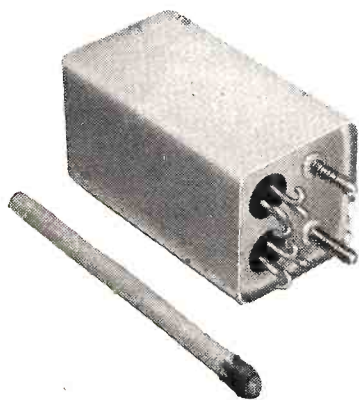
SENSITIVE MINIATURE RELAYS

perfectly counter-balanced armature

Contact arrangements up to and including D.P. D.T. 3 amp at 28 volts D.C., or 100 milliamperes at 150 volts D.C. resistive load.

This miniature HERMETICALLY SEALED relay is designed to operate thru wide ranges of environment including the shock requirements of MIL-E-5400. It will withstand 50 G's acceleration without malfunctioning and its use is recommended wherever extremes of shock, temperature and severe vibration are encountered.

Required coil power as low as 20 milliwatts.
Coil resistance up to 15,000 ohms.
Weight, max. 3.0 oz.



BEST BY ANY COMPARISON

ENVIRONMENT FREE
ELECTRICAL EQUIPMENT by

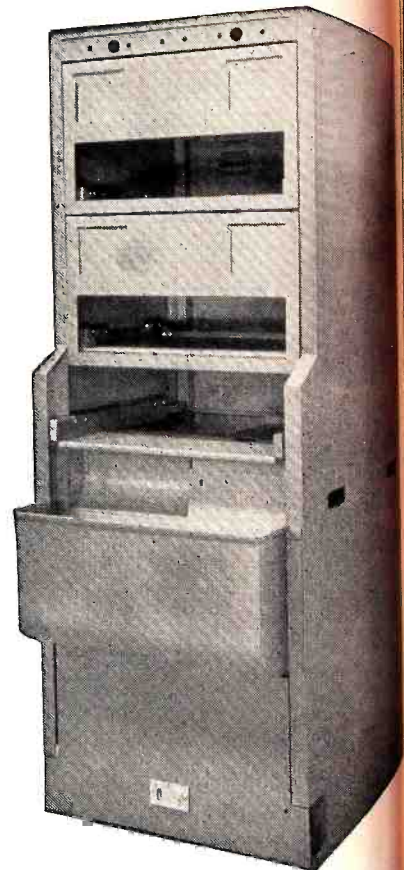


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Sheet Metal Craftsmen

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MINIATURE IN SIZE - GIGANTIC IN PERFORMANCE

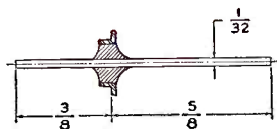
FUSITE GLASS-TO-METAL HERMETIC TERMINALS

These Miniatures

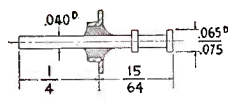
... Now Available in these Electrode Treatments



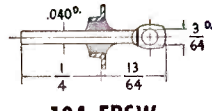
Illustrated
#104 THFP



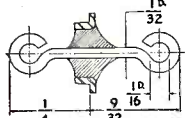
104 SW



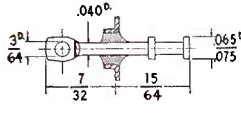
104 THSW



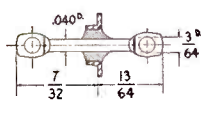
104 FPSW



104 L

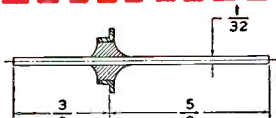


104 THFP

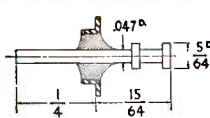


104 FP

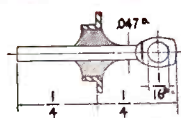
104 SERIES



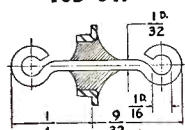
105 SW



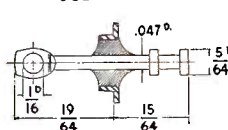
105 THSW



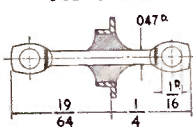
105 FPSW



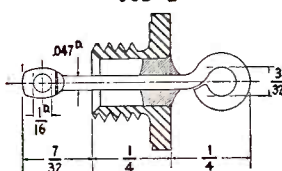
105 L



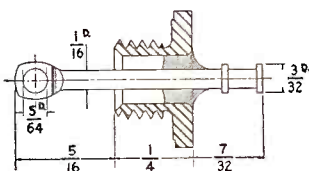
105 THFP



105 FP



105 TB Loop FP

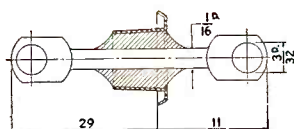


105 TB THFP

105 SERIES



Illustrated
#106 FP



106 FP

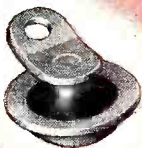
GENERAL SPECIFICATIONS

MATERIALS—C. R. Steel disc and steel electrodes. Interfused with glass.

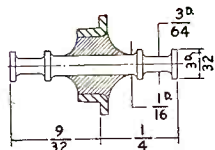
PRESSURE TEST—12 pounds gauge.

INSULATION TEST—10,000 megohms after salt water immersion.

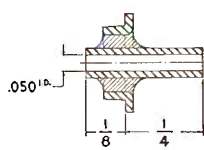
SUDDEN THERMAL SHOCK TEST—dry ice to boiling water.



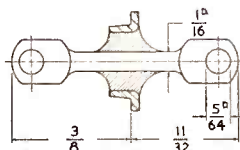
Illustrated
#107 BLHT



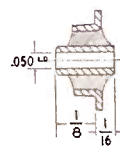
107 TH



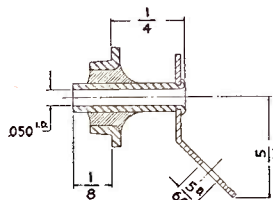
107 HT



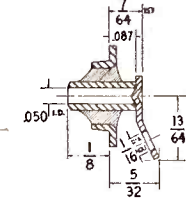
107 FP



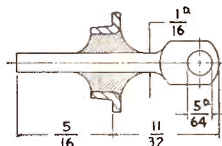
107 HT (Short)



107 HTL



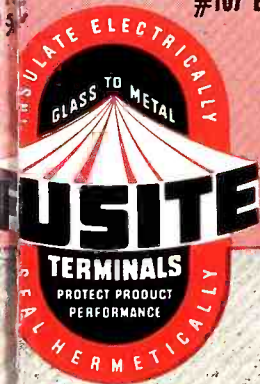
107 BLHT



107 FPSW

Write
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107 SERIES



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Roanwell

ENGINEERS AND MANUFACTURERS OF
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Manufacturers of most types to military specs, including HS-33/A, HS-46A/UR, HS-38A, submersion proof Navy type 49507A, and protective helmet components. Specialists in the manufacture of all headsets for commercial and military use.



	<h3>STANDARD HANDSETS</h3> <p>Specialists in the manufacture of most types of handsets, both commercial and military. Available with choice of standard cartridges, switches, cordage and circuits.</p>
	<h3>CONFIDENCER</h3> <ul style="list-style-type: none"> • The only scientifically engineered noise-cancelling transmitter for use on most standard handsets. • Substantially cancels objectionable ambient noises. Signal-to-noise ratio 16 db. • APPROVED FOR USE BY THE BELL TELEPHONE COMPANIES
	<h3>TELEPHONE HANGERS AND SWITCHBOX HANGERS</h3> <ul style="list-style-type: none"> • Patented spring-lock action—eliminates vibration, prevents side sway or accidental ejection. • Switch combinations from S.P.D.T. to T.P.D.T. • Hanger assembly also available with mounting bracket only instead of switchbox.
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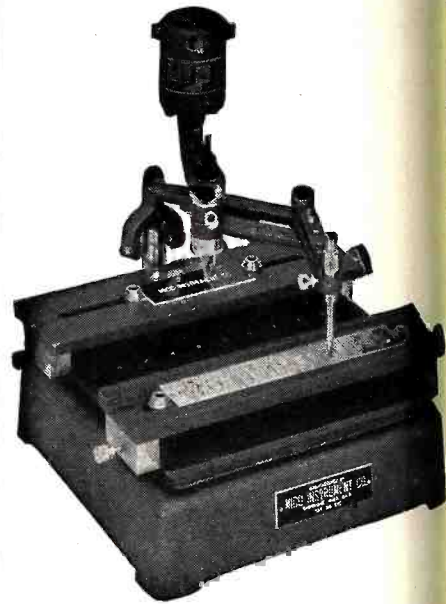
All *Roanwell* products are manufactured to rigid specs under government approved quality control system.

Write for detailed data sheets on all above items.

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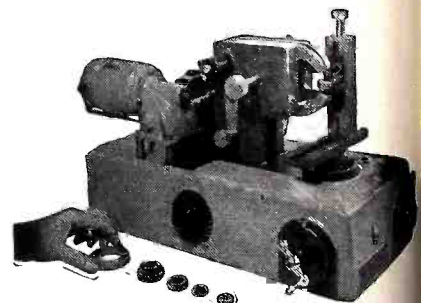
Catalogue on request

UHF COAXIAL WAVEMETERS



2-75
Centimeter
Range

- MODEL 433 20 to 75 Centimeters
MODEL 501 4 to 20 Centimeters
MODEL 402A 2 to 10 Centimeters
MODEL 402B 2 to 10 centimeters (Reaction Type)



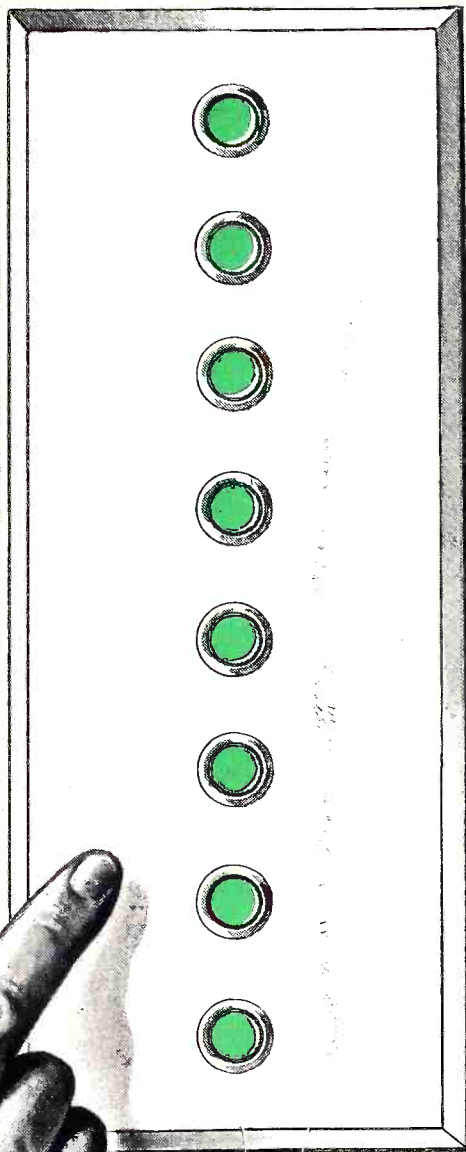
TOROID COIL WINDERS

Wide-range, laboratory-type machines available for winding samples and small production runs toroid coils. Production machines built to meet specific requirements.

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77 Trowbridge St., Cambridge, Mass.

Almost as easy as this...



TV Wire

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**High-Temperature
(Teflon) Wire**

When you need wire, it's good to know that there's a dependable SYNKOTE construction for every conceivable electrical and electronic use. If we don't have it in stock, we'll manufacture it to meet your requirements. For prices, samples or technical assistance, contact your nearest Plastoid representative . . . or call these men:

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Corporation

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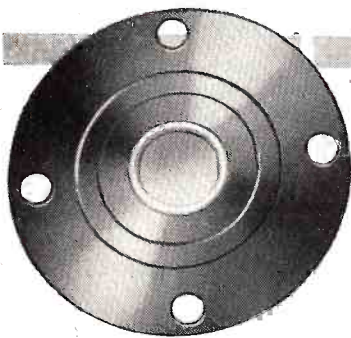


INSULATED WIRE AND CABLE

GAS SWITCHING TUBES

Bomac has available an extensive line of TR, ATR, Pre TR and attenuator tubes covering all the frequency bands and power levels in use. Many types are in high level production; specialized types can be supplied on short notice. Inquiries are invited on types not listed, or for special frequency bands. If clearance is needed, you will be advised of the appropriate government agency to contact.

	FREQ.	DESCRIPTION
K BAND	23630-24580	TR, Integral Cavity, Tunable
	23500-24500	ATR, Fixed-Tuned, Low Q
	23350-24950	TR, Band Pass
Ku BAND	16200-16800	ATR, Fixed-Tuned, Low Q
	16200-16800	TR, Integral Cavity, Tunable
X BAND	9300-9450	Cross Guide Duplexer
	9050-9600	ATR, Fixed-Tuned, Low Q
	9000-9600	ATR, Fixed-Tuned
	9000-9600	ATR, Fixed-Tuned
	8600-9650	TR, Glass Envelope, Fixed-Tuned
	8600-9050	ATR, Fixed-Tuned, Low Q
	8490-9600	TR, Integral Cavity, Tunable
	8490-9600	TR, Integral Cavity, Tunable
	8490-9600	TR, Integral Cavity, Tunable, Reservoirless
	8490-9600	TR, Tunable, Reservoirless
	8490-9600	TR, Tunable, Reservoirless
	8490-9600	TR, Side Ignitor, Tunable
	8490-9578	TR, Band Pass
8490-9578	TR, Double 1B63A	
Xb BAND	6200-6700 6000-7100	ATR, Fixed Tuned, Low Q TR, Integral Cavity, Tunable



Available for all Wave Guide Sizes
Low Q Broad Band Match
Low Insertion Loss
Temperature Range — 55°C to 100°C
30 lb./sq. in. Pressure Differential
For Choke Mounting or Soldering
Directly to Guide

PRESSURIZING WINDOWS

TYPE	FREQ.	DESCRIPTION
BL105	9375	P.W. RG 51/u Guide
BL106	9245	P.W. RG 52/u Guide
BL107	9310	P.W. RG 51/u Guide
BL112	9080	P.W. RG 52/u Guide
BL114	9310	P.W. RG 51/u Guide
BL116	16,100	P.W. RG 91/u Guide
BL117	9080	P.W. RG 52/u Guide
BL119	8700-8900	P.W. RG 52/u Guide
BL122	8620-9530	P.W. RG 52/u Guide
BL123	6500	P.W. RG 51/u Guide



HYDROGEN THYRATRONS

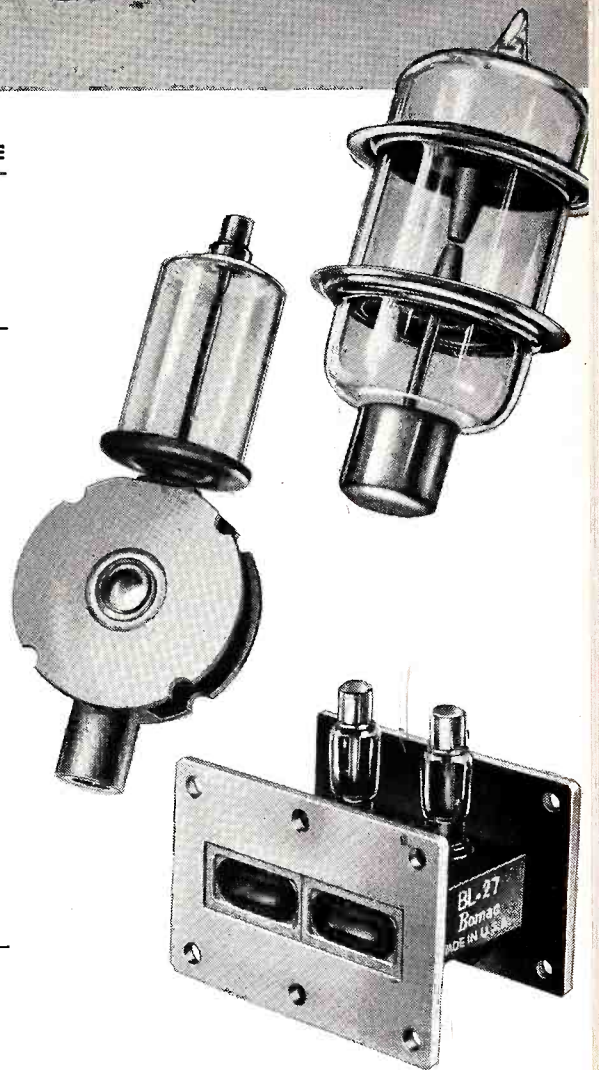
Bomac Hydrogen Thyratrons are designed primarily for use as a tube in line type modulators for magnetrons in radar equipment. However, it has also found many applications in laboratory, production test equipment where precise timing at high power levels is required.

TYPE	Peak Anode Voltage KV Max.	Peak Anode Current Amps Max.	Average Anode Current MA Max.	Peak Trigger Voltage Volts Min.
3C45	3.0	35	45	175
4C35	8.0	90	100	175
5C22	16.0	325	200	200
VC1258	1.0	20	50	130
6130	3.0	35	45	175 High Altitude
5959/E4	8.0	35	45	130
5957/E37	8.0	90	100	175 Water
HT415	16.0	325	200	200 Low Altitude

SPARK GAP MODULATORS

TUBES AND COMPONENTS

	FREQ.	DESCRIPTION	TYPE
AD	5395-5905	TR, Band Pass, Fixed-Tuned	5865
	5200-5530	TR, Band Pass, Fixed-Tuned	5925
	5280-5450	ATR, Fixed-Tuned	6022
	5555-5725	ATR, Fixed-Tuned	6081
AD	3550-3700	ATR, Fixed-Tuned, Low Q	1B52
	3400-3550	ATR, Fixed-Tuned, Low Q	1B53
	3300-3700	Pre-TR	1B54
	3250-3400	ATR, Fixed-Tuned, Low Q	1B57
	3100-3650	TR, Band Pass	1B55
	3100-3500	TR, Band Pass, Fixed-Tuned	5927
	3000-3100	ATR, Fixed-Tuned, Low Q	5793
	2900-3000	ATR, Fixed-Tuned, Low Q	5792
	2870-3230	TR, Band Pass	5853
	2800-2900	ATR, Fixed-Tuned, Low Q	1B56
	2750-2850	ATR, Fixed-Tuned, Low Q	6024
	2700-3400	TR, Glass Envelope, Tunable	1B27
	2700-3400	TR, Glass Envelope, Tunable	BL-8
	2700-3400	TR, Glass Envelope, Ruggedized	BL-31
	2700-3300	TR, Glass Envelope, Fixed-Tuned	1B62
	2700-3300	TR, Glass Envelope, Fixed-Tuned	721B
	2700-2800	ATR, Fixed-Tuned, Low Q	1B44
	2650-2950	Pre-TR	1B38
	2600-3000	TR, Band Pass	1B58
	2600-3000	TR, Band Pass Pressurized System	6117
AD	1215-1355	TR, Glass Envelope, Tunable	BL-25
	1075-1095	TR, Fixed-Tuned, Electrodeless Discharge	1B40
	900-1200	TR, Glass Envelope, Fixed-Tuned	1B23



1N23B BOMAC GERMANIUM DIODES

Bomac Silicon Diodes are manufactured to exceptionally high standards to assure electrical uniformity and mechanical stability. New design considerations and improved manufacturing techniques have resulted in X and S band crystals of increased burnout resistance and higher humidity resistance.

TYPE NO.	1N21B	1N21C	1N23B	1N23BM	1N23C
FREQUENCY (mc)	3,000	3,000	10,000	Matched pair of 1N23B diodes for balanced mixer use.	9,375
CONVERSION LOSS (db. max.)	6.5	5.5	6.5		6.0
NOISE RATIO (max.)	2.0	1.5	2.7		1.8
BURNOUT (ergs)	2.0	2.0	1.0		1.0

Invite your inquiries regarding

- ENGINEERING
- DEVELOPMENT
- PRODUCTION

Catalog on request. Write Dept. C, (on your company letterhead) BOMAC Laboratories, Inc., Beverly, Mass.

Bomac

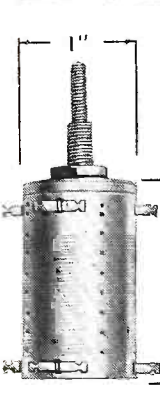
LABORATORIES, INC.
BEVERLY, MASSACHUSETTS



COIL FORMS



XR-50
 These mica-filled bakelite coil forms may be wound as desired to provide a permeability tuned coil. The form winding length is 11/16" and the form winding diameter is 1/2 inch. The iron slug is 3/8" dia. by 1/2" long.
XR-51 same but with brass slug.



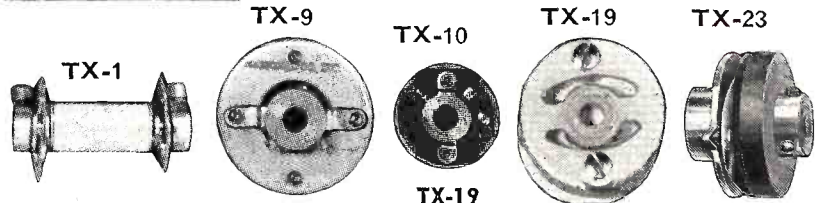
High-grade ceramic coil forms conforming to JAN specifications. May be wound as desired to provide a permeability-tuned coil. Extra lugs provided

XR-60 Grooved for #26 wire with iron slug
XR-61 Grooved for #26 wire with brass slug
XR-62 Not grooved, winding length 1 1/4" with iron slug
XR-63 Not grooved, winding length 1 3/4" with brass slug



XR-70 Grooved for #19 wire with iron slug
XR-71 Grooved for #19 wire with brass slug
XR-72 Not grooved, winding length 1" with iron slug
XR-73 Not grooved, winding length 1" with brass slug

COUPLINGS



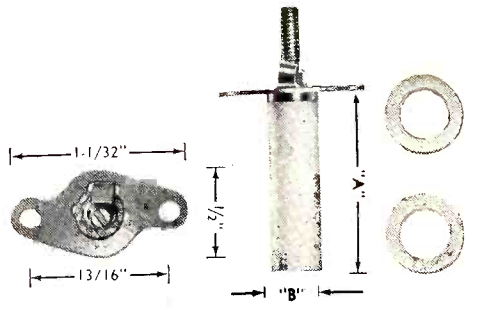
TX-1, Leakage path 1".

TX-9
 This small insulated flexible coupling provides high electrical efficiency when used to isolate circuits. Insulation is steatite. 1 5/8" diam. Fits 1/4" shaft.

TX-10
 A very compact insulated coupling free from backlash. Insulation is canvas bakelite. 1-1/16" diam. Fits 1/4" shaft.

TX-19
 A steatite insulated flexible coupling for 1/4" shafts. Conservatively rated at 5000 volts peak. Diameter 1 3/8", length 1". Length and flash-over voltage can be increased by turning collars outboard.

TX-23
 A deluxe insulated flexible coupling designed for coupling 1/4" shafts. Will handle a maximum radial misalignment of 1/16" also 2 degrees maximum angular misalignment.



TYPE	CORE	"A" DIM.	"B" DIM.
XR 80	BRASS	1 1/4"	1/64"
XR 81	IRON	1 1/4"	1/64"
XR 82	BRASS	1 3/4"	1/64"
XR 83	IRON	1 3/4"	1/64"
XR 90	BRASS	1 1/4"	3/8"
XR 91	IRON	1 1/4"	3/8"
XR 92	BRASS	1 3/4"	3/8"
XR 93	IRON	1 3/4"	3/8"

SAFETY GRID AND PLATE CAPS



SPP-9
 Ceramic insulation. Fits 9/16" diameter.

SPP-3
 Ceramic insulation. Fits 3/8" diameter. National Safety Grid and Plate Caps have a ceramic body which offers protection against accidental contact with high voltage caps on tubes.

GRID AND PLATE GRIPS

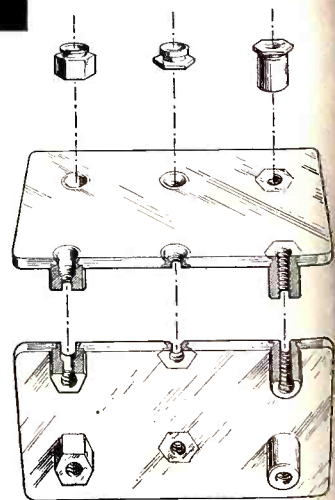
Type 12, for 9/16" Caps
Type 24, for 3/8" Caps
Type 8, for 1/4" Caps

National Grid and Plate Grips provide a secure and positive contact with the tube cap and yet are released easily by a slight pressure on the ear.

Write Dept. 330
for complete catalog
or detail drawings
of parts advertised

CAPTIVE NUTS

National Captive Nuts of stainless steel may be pressed into aluminum and certain types of brass sheet metal to provide integral flush-mounted tapped holes in a wide variety of sizes. Four basic types have been designed for metal thicknesses of 1/16", 3/32", 1/8", 3/16" and 1/4".



DIALS, MECHANISMS AND KNOBS

H (gray or black)

The HRS series knobs are a popular easy to grip knob. They are molded of high quality plastic and have 1 3/8" dia. Chrome plated bevel skirts fit 1/4" shafts available in the following scales:

HRS-1	ON-OFF	through 30°
HRS-2	5-0-5	through 180°
HRS-3	0-10	through 300°
HRS-4	Single etched line	
HRS-5	0-10	through 180°

H (gray or black)

A HRS type knob without the chrome plated skirt but with a white dot for spotting relative control settings.

HRT-M

A smaller version of the HRT — now available in choice of gray or black — is 1-7/16" in diameter.

AD Dial

The original "Velvet Vernier" mechanism in a metal skirted 1 1/3" in dia. ratio 5 to 1. It is available with 2, 3, 4, 5 or 10 scale and fits 1/4" shaft. Mechanisms also available separately.

N Dial

The four-inch N and AD Dials have engine divided and stamped scales respectively. The N Dial has a decimal vernier; the AD Dial employs a pointer. The planetary gear has a ratio of 5 to 1, and is contained within the body of the dial. 2, 3, 4, 5 or black scale. Fits 1/4" shaft. Specify scale.

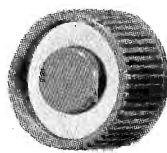


HRS-1

HRS-2

HRS-3

HR



HRT-M



AM



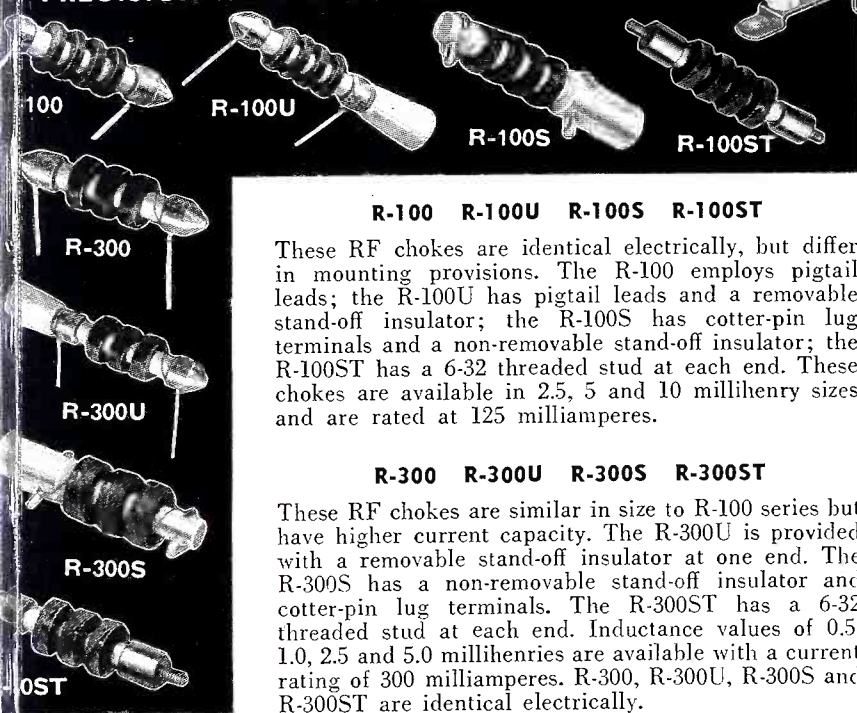
N

HRM KNOB



This straight knurl brass, satin chrome finished knob with arrowhead fits 1/4" shaft. See catalogue for description.

PRECISION-WOUND R.F. CHOKES



R-100 R-100U R-100S R-100ST

These RF chokes are identical electrically, but differ in mounting provisions. The R-100 employs pigtail leads; the R-100U has pigtail leads and a removable stand-off insulator; the R-100S has cotter-pin lug terminals and a non-removable stand-off insulator; the R-100ST has a 6-32 threaded stud at each end. These chokes are available in 2.5, 5 and 10 millihenry sizes and are rated at 125 milliamperes.

R-300 R-300U R-300S R-300ST

These RF chokes are similar in size to R-100 series but have higher current capacity. The R-300U is provided with a removable stand-off insulator at one end. The R-300S has a non-removable stand-off insulator and cotter-pin lug terminals. The R-300ST has a 6-32 threaded stud at each end. Inductance values of 0.5, 1.0, 2.5 and 5.0 millihenries are available with a current rating of 300 milliamperes. R-300, R-300U, R-300S and R-300ST are identical electrically.

R-33

The R-33 series chokes are 2-section RF chokes available in 10, 50, 100 and 750 microhenry sizes. Also available in this series is a single layer solenoid choke of 1 microhenry inductance. All are rated at 100 milliamperes. The chokes are wound on a 5/8" long form and range in diameter up to 5/16" maximum.

R-50

R-50-1

The R-50 series chokes are 3 and 4-section RF chokes and available in 0.5, 1, 2.5, and 10 millihenry sizes. They are rated at 100 milliamperes. The chokes are wound on a 1" long form and have a maximum diameter of 15/32". The 10 millihenry R-50-1 choke is wound on an iron core.

R-152

For use in the range between 2 and 4 Mc. Ideal for high power transmitter stages operated in the 80 meter amateur band. Inductance 4 m.h., DC resistance 10 ohms, DC current 600 ma. Coils honeycomb wound on steatite core.

Commercial Electronic Equipment

The National Company has designed and built many types of electronic equipment to rigid specifications for military, scientific and commercial purposes. The U. S. Navy, and other government agencies, as well as the nation's largest airports are among the many users of National equipment. Send inquiries to the Commercial Division.

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Write for drawings DEPT. 830 NATIONAL CO., 61 SHERMAN ST., MALDEN, MASS.



CR-3B Single-Channel Receiver

NATIONAL COMPANY, INC.

61 Sherman St., Malden, Mass.



PRECISION LABORATORY ★ TEST EQUIPMENT ★

New RF STEP ATTENUATOR*

Small, rugged ladder attenuator achieves attenuation accuracy and low vswr from dc to uhf. Suitable for all signal and sweep generators in this frequency range.

Care in design assures maximum flexibility in mounting, drive, and types of input and output connections.

Easily adaptable for inclusion in different types of test equipment and in laboratory and production test applications.

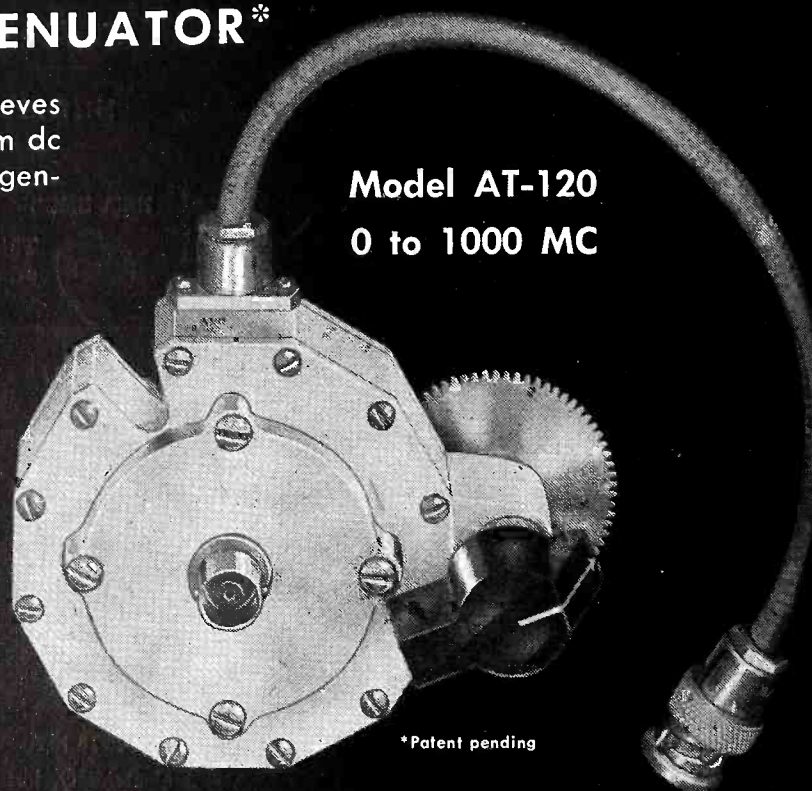
SPECIFICATIONS

- **MAXIMUM STEPS**
Ten (eleven contact positions)
- **ATTENUATION RANGE**
Up to 120 db total
Attenuation per step optional
- **OUTPUT IMPEDANCE**
50 or 75 ohms nominal

- **INPUT IMPEDANCE**
100 or 150 ohms nominal
50 or 75 ohms optional

- **INPUT AND OUTPUT VSWR**
1.1 to 1000 mc at 50 ohms

- **ACCURACY**
 $\pm .3$ db per 20 db step
from its dc value up to 1000 mc



*Patent pending

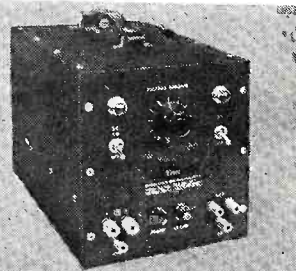


**STANDARD SIGNAL GENERATOR
SG-25**

An R.F. Signal Generator operating over the frequency range 10kc to 50 megacycles. Output voltages adjustable from 0.1 microvolts to 0.1 volts across 50 ohms with an accuracy of ± 1 db. Built in crystal calibrator provided for accurate frequency setting. Internal modulation 400 and 1000 cps. Operates on 115 volts, 50 to 1000 cycles. Complete with accessories.

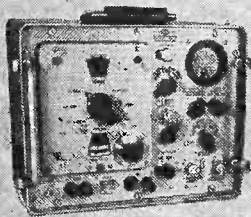
VARIABLE FREQUENCY POWER SUPPLY VS-500

VS-500 has been primarily designed for the purpose of testing Electronic Equipment. . . . uses ac power sources of frequencies ranging from 50 to 3000 cycles. However, it finds many other laboratory applications such as testing transformers over a wide frequency range, at high power levels, operating synchronous motors at variable speeds. Many attractive special features are incorporated.



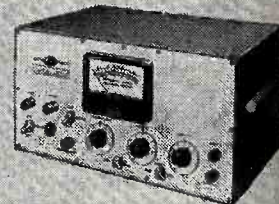
MODEL PP-180 REGULATED DC POWER SUPPLY

A dependable source of power over a voltage range of 180 to 360 volts D.C. at 100 MA and 6.3 volts A.C. at 5 amps. from input of 105 to 125 volts 50 to 60 cps. Regulation approximately 1% over the D.C. voltage range 0 to 75 MA. Total noise and hum less than .005 volts for any rated condition of operation.



STANDING WAVE INDICATOR SW-12

Accurately indicates standing wave ratios 1:1 to 4:1. Operates on 115 volts 50 to 800 cycles. Designed for use with a square law crystal detector or bolometer probe which samples R.F. voltage from a slotted line. Of shock resistant, non-microphonic construction. Complete with carrying case and detachable cover.

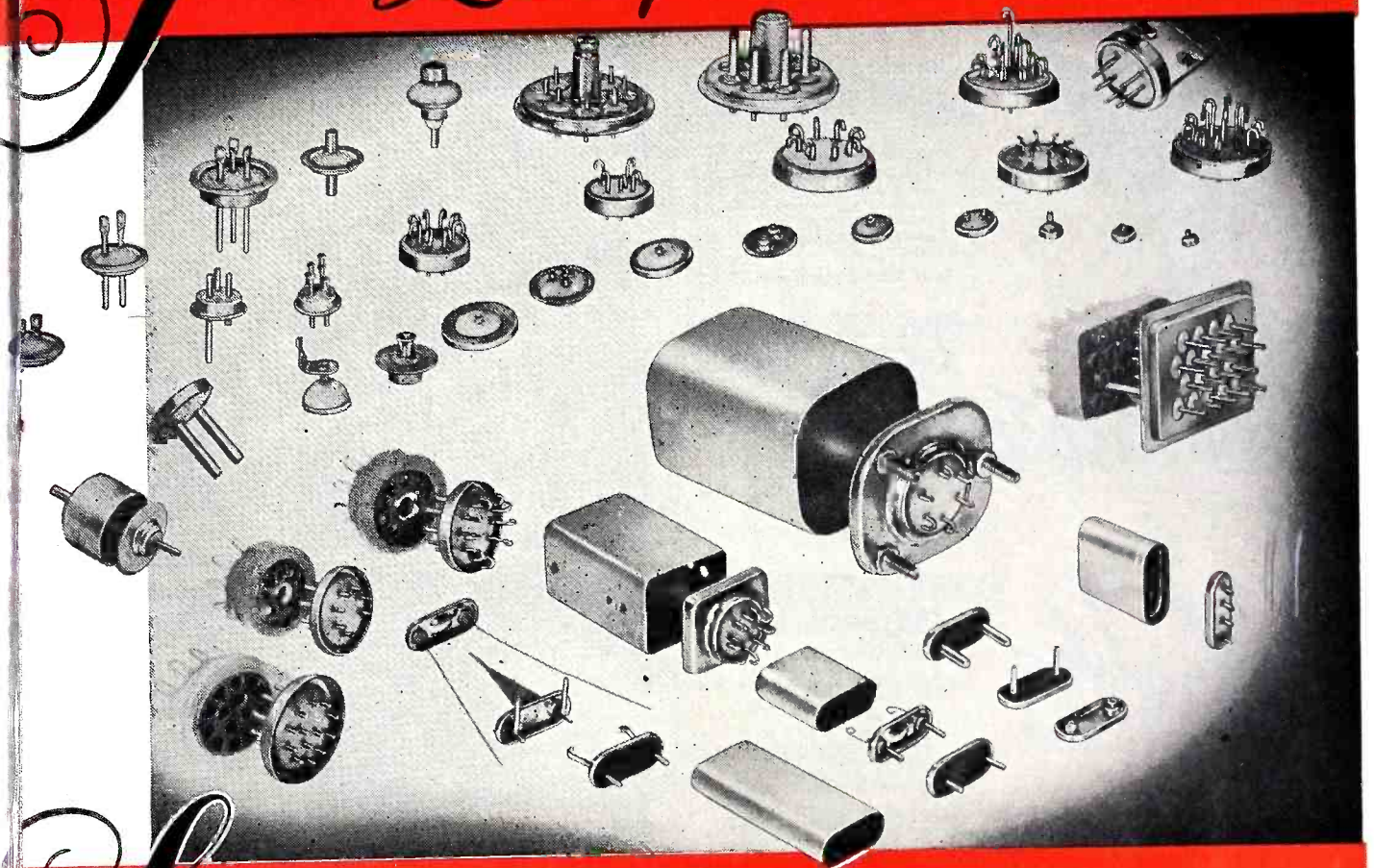


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TELEVISION CORPORATION

1001 FIRST AVE., ASBURY PARK, N. J.

FOR *Quality* HERMETIC SEALS



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- Hermetic's conspicuous versatility in product-achievement has been made possible by the creative ability of its engineering staff. As a result, when industry thinks of hermetic seals, the name HERMETIC SEAL PRODUCTS CO. comes instantly to mind. In the greatly expanded field of hermetic sealing, the reputation of this company stands first and foremost.

In addition to exclusive design features, Hermetic headers will withstand mass spectrometer leak tests, -55°F . conditions, swamp test, temperature cycling, high vacuum, high pressure, salt water immer-

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sion and spray, etc. They are the only headers you can hot tin dip at 525°F . for easy assembly soldering for a strain and fissure-free sealed part with resistance of over 10,000 megohms.

Free Write for your copy of the most complete catalog ever produced on hermetic seals.



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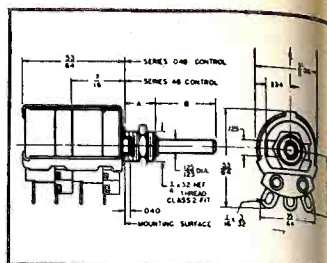
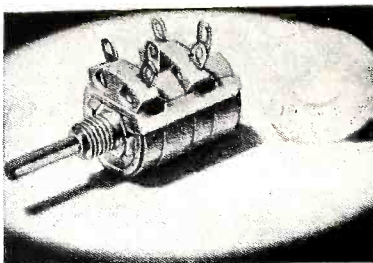
Armed Services requirements as to corrosion-resistant materials and plating, low-temperature operation, vibration, rigid electrical and mechanical specifications, etc., can be incorporated in any of the Clarostat units.

COMPOSITION-ELEMENT CONTROLS (Series 48)

5/8 DIA. FOR MINIATURIZATION

Linear, 500 ohms to 5 megohms.
Taper, 2,500 ohms to 2.5 megohms;
10% resistance at 50% C.W. rotation.
Rated at 0.2 watt for linear units.
300° rotation.
Shaft locking device may be incorporated upon request.
Single and multiple units available.

Engineering Bulletin No. 121

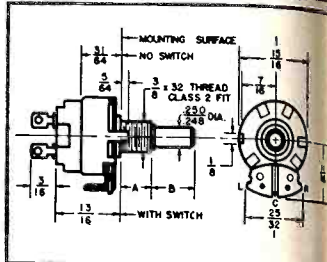
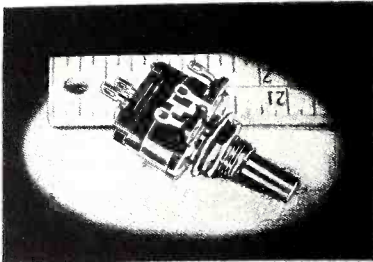


COMPOSITION-ELEMENT CONTROLS (Series 47)

15/16 DIA.

Linear, 500 ohms to 5 megohms.
Tapered, 1,000 ohms to 5 megohms.
Rated at 0.25 watt for linear units.
Standard taps at 30% or 70% of effective rotation.
300° rotation without switch; 330° with switch.

Engineering Bulletin No. 117

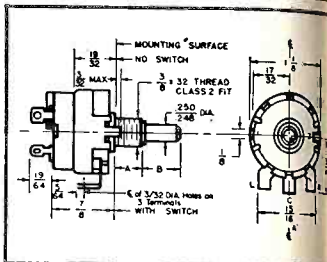
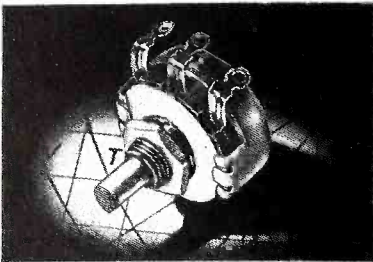


COMPOSITION-ELEMENT CONTROLS (Series 37)

1-1/8 DIA.

Linear, 500 ohms to 10 megohms.
Tapered, 1,000 ohms to 10 megohms.
Rated at 0.5 watt for linear units.
Standard taps at 37 1/2%, 50% and 62 1/2% of effective rotation.
300° rotation without switch; 330° with switch.

Engineering Bulletin No. 112

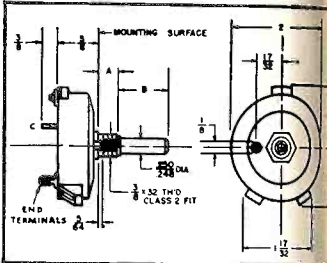
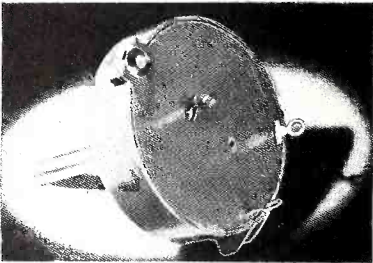


COMPOSITION-ELEMENT CONTROLS (Series 51)

2" DIA., HI-VOLTAGE, HI-RESISTANCE

Resistance range, 5,000 ohms to 50 megohms for linear units.
Rated at 1 watt.
Insulation, 10,000 volts D.C. to ground, 4,000 volts maximum across end terminals.

Engineering Bulletin No. 119

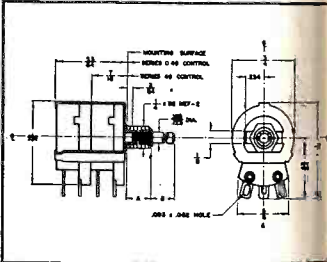
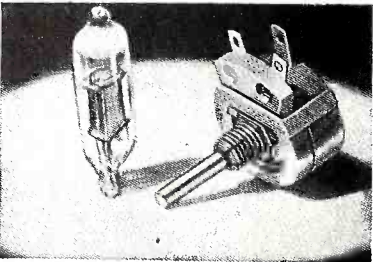


WIRE-WOUND CONTROLS (Series 49)

3/4 DIA. FOR MINIATURIZATION

Linear, 10 to 10,000 ohms.
Rated at 1 watt.
Mechanical and Electrical rotation 300°.
360° Mechanical rotation available. Max. 355° Electrical.
Shaft locking device may be incorporated.
In single or multiple units.

Engineering Bulletin No. 104

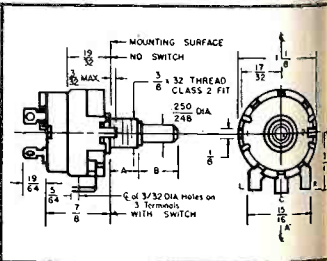
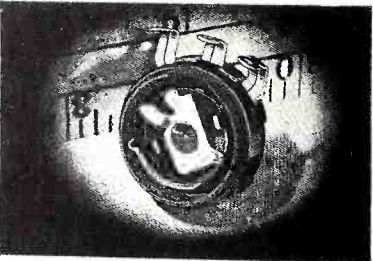


WIRE-WOUND CONTROLS (Series 43)

1-1/8 DIA.

Linear, 1 to 10,000 ohms.
Tapered, submit your requirements.
Rated at 2 watts, for linear units.
Mechanical rotation 300°. Electrical 280° without switch; 260° with switch.

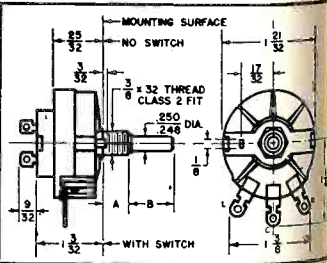
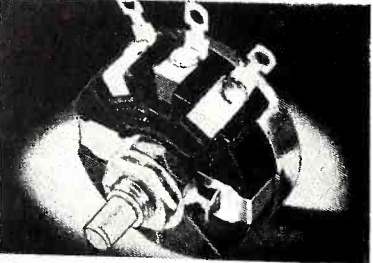
Engineering Bulletin No. 116



WIRE-WOUND CONTROLS (Series 58)

Linear, 1 to 50,000 ohms.
Tapered, 5 to 25,000 ohms.
Non-inductive 1 to 12,000 ohms, linear only.
Linear, 3 watts.
Mechanical rotation 300°. Electrical 280° without switch; 240° with switch.

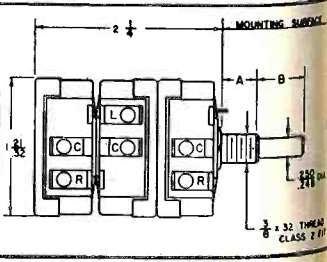
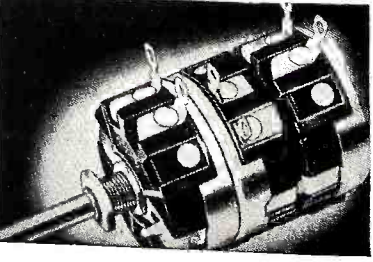
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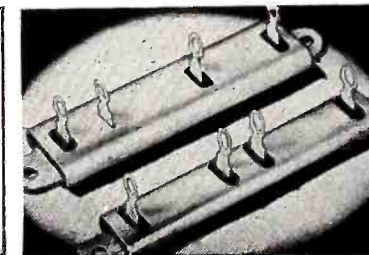
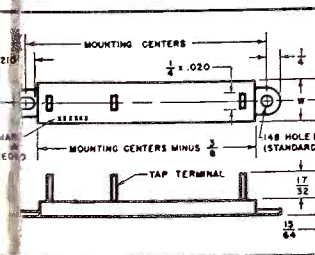
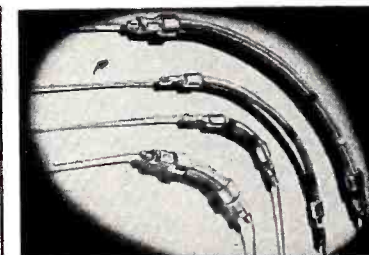
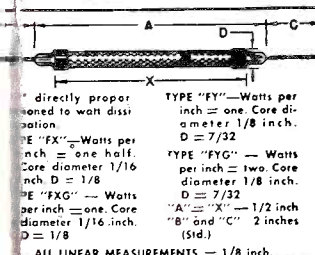
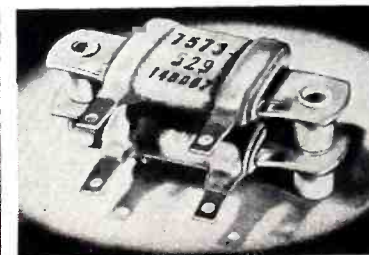
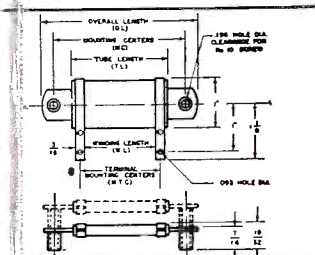
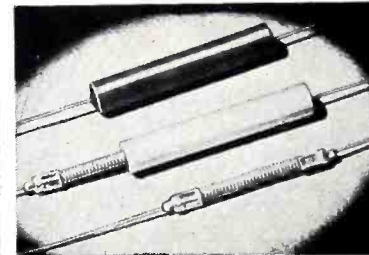
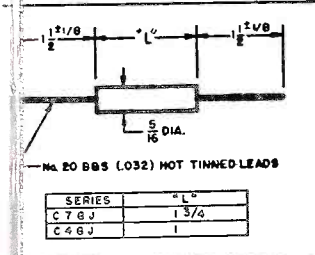
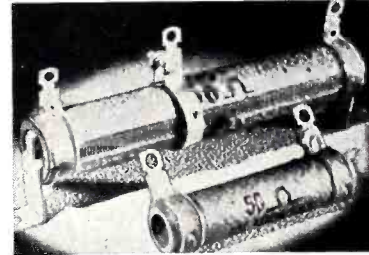
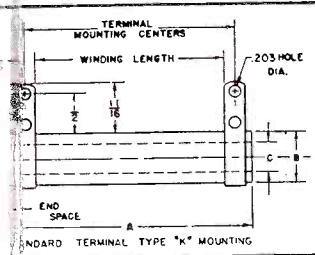
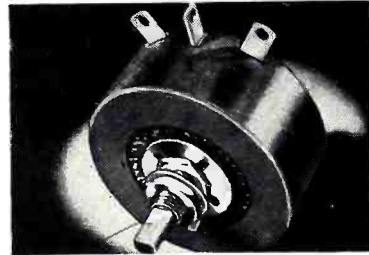
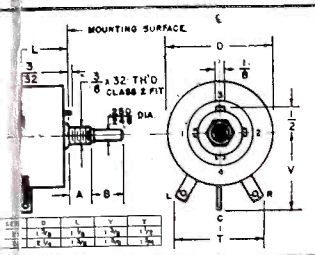
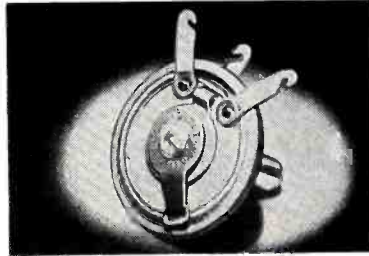
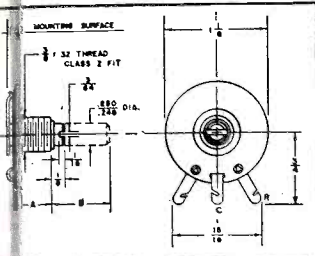
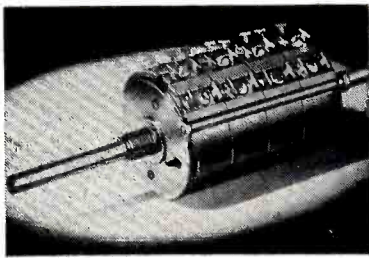
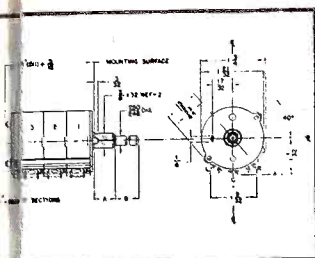


CONSTANT-IMPEDANCE PADS (Series CIT-58)

Attenuation zero to 30 db in first 90% of C.W. rotation, approx. linear. Infinite attenuation reached in last 10%. Impedance range from 2 to 10,000 ohms, standard values. Refer to bulletin. 2.5 watts continuous DC rating. Series C18 rated at 10 watts. "L" pads, Bridged "T" pads, Bridged "H" pads, available.

Engineering Bulletin No. 102, and Bulletin No. 111





HIGH-PRECISION CONTROLS (Series 42a)

Up to 18 sections in one unit assembly. Single shaft. No back lash. Linear: 10 to 100,000 ohms standard. Max. resistance: 350 ohms per degree of rotation. Tapered, submit your requirements. Linearity up to $\pm 0.5\%$. Power rating for linear units, 3 watts per section. Standard rotation: Mech. 290° ; Elec. 280° .

Engineering Bulletin No. 142

WIRE-WOUND CONTROLS (Series MH)

"HUMDINGER" **

Ultra-compact potentiometer or rheostat. 2 to 1,000 ohms, only linear resistance feasible. Rating, 1 watt. Intermediate taps are special. Metal dust-proof cover available.

Engineering Bulletin No. 103

POWER RHEOSTATS (Series 25 & 50)

Full power rating even at $1/3$ of rotation. 25-watt, $1/2$ to 2,500 ohms; 50-watt, $1/2$ to 5,000 ohms. Linear and tapered. Tandem units available. 25G and 50G approved under MIL-R-6749 specifications.

Engineering Bulletin No. 115

"GREENOHM" * POWER RESISTORS

Fixed, 4 to 200 watts; adjustables, 10 to 200 watts. $\pm 5\%$ for values of 50 ohms and higher. $\pm 10\%$ for values below 50 ohms. $\pm 1\%$ special. Intermediate taps, upon order. Widest choice of mountings and terminals. Non-inductive units made to specifications.

Engineering Bulletin No. 113

"GREENOHM JR." ** POWER RESISTORS (Series GJ)

C7GJ, 7-watt, 0.5 to 5,000 ohms. C4GJ, 4-watt, 0.5 to 1,000 ohms. Standard resistance tolerance $\pm 10\%$.

Breakdown voltage between surface and resistance element, > 2500 volts A.C. Ceramic tube casing. Inorganic materials throughout. Pigtail terminals, standard.

Engineering Bulletin No. 110

POWER RESISTORS (Series ZT)

STACK-MOUNTING

30, 40, 55, 65 and 75 watt ratings. 0.5 to 65,000 ohms maximum. Mounting collars provide adequate free-air circulation for maximum heat radiation.

Engineering Bulletin No. 113

"GLASOHM" * FLEXIBLE RESISTORS (Series FXG and FYG)

Used as resistors and also as miniature heating elements. Ratings per winding inch: FXG, 1-watt; FYG, 2-watt. Clinch-grip ferrule ends with bare pigtail terminals. Other terminals, special.

Engineering Bulletin No. 105

METAL-CLAD MOLDED RESISTORS (Series MMR)

From 5 ohms to 15,000 ohms per winding inch. Ratings: 5 watts per winding inch, mounted on metal. $2 1/2$ watts in free air. Intermediate taps. Horizontal and vertical mountings.

Engineering Bulletin No. 109

CLAROSTAT

MFG. CO., INC.

DOVER, N. H.

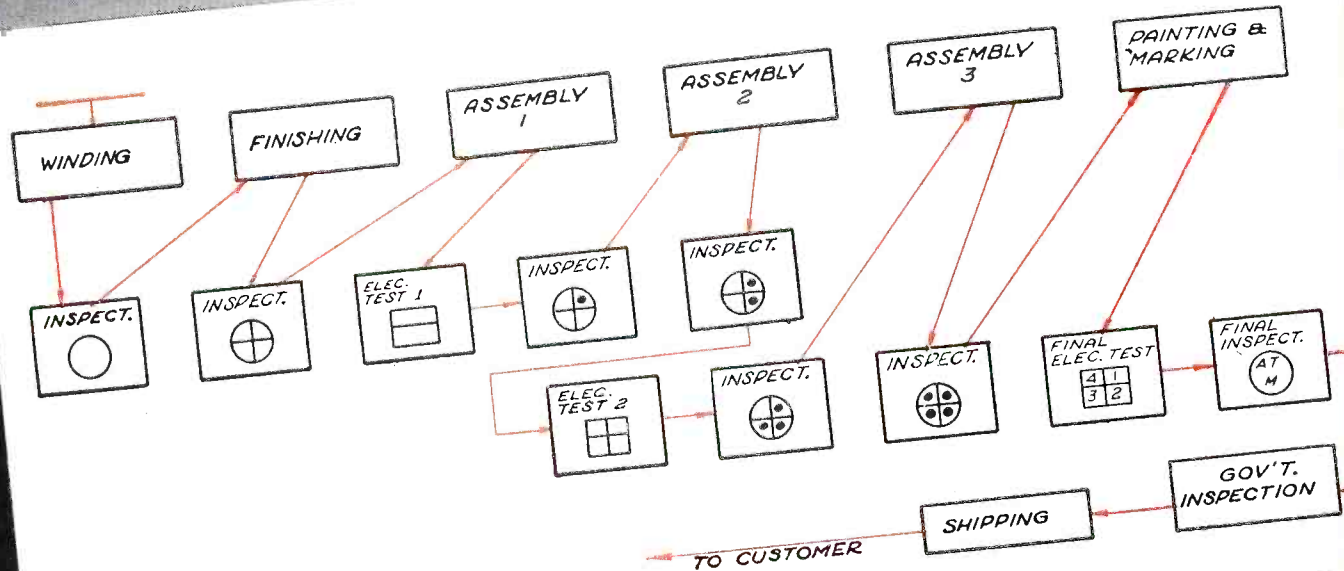
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Large wall chart on request. • Write for bulletins of particular interest to you. • Submit your resistance and control problems. • Let us quote.

Quality First

Your Transformer Has To Pass These 10 Inspections



Equipment pictured are samples of the various types of transformers manufactured by Aircraft Transformer

Corporation, originators of the famed **FORM FLEX**

AIRCRAFT TRANSFORMER CORPORATION



MANUFACTURERS OF INDUCTIVE EQUIPMENT • LONG BRANCH, NEW JERSEY. LONG BRANCH 6-6250

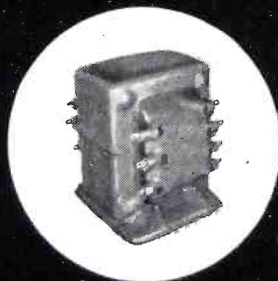
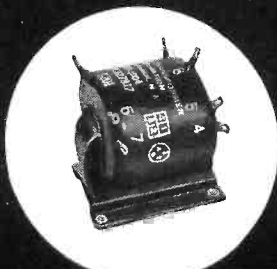


Plate and Filament



Blocking Oscillator



Audio



Filament



Pulse

Representatives now located in principal cities throughout the country. Write for address of the one nearest you.

B & W TEST INSTRUMENTS

DISTORTION METER, Model 400. A highly sensitive instrument having a wide range of applications in the audio measurements field. Noise and distortion measurements with a minimum input of .3 volts. Measures harmonics up to 100 cycles. A variable filter provides single frequency suppression between 30 and 15,000 cycles.

AUDIO OSCILLATOR, Model 200. This low-distortion field laboratory instrument provides stable, accurately-tuned audio frequencies from 30 to 30,000 cycles. Output response better than ± 1 d. b. from 500 to 5,000 cycles with 500 ohm load.

FREQUENCY METER, Model 300. An indispensable instrument for accurate and direct measurement of unknown frequencies from 0 to 30,000 cycles in 6 ranges. Operates with a minimum of .25 volts input and any waveform with peak ratios of less than 8 to 1.

RF SIGNAL DETECTOR, Model 404. Combines R-F detection and audio bridging circuits to complement any distortion meter lacking these features. When combined with the Model 400, noise and distortion measurements can be made from AM carriers or in balanced and unbalanced audio circuits. Freq. range 400 KC to 30 MC.

WAVE CLIPPER, Model 250. When driven by the Model 200 Audio Oscillator or equivalent it replaces a square wave generator in most tests. Provides a clipped sine wave for accurate analysis of audio circuit characteristics.

GRID-DIP METER, Model 600. A highly sensitive, accurately calibrated grid-dip meter, auxiliary signal generator and absorption wave meter. Frequency range 1.75 to 260 MC in 5 overlapping bands.

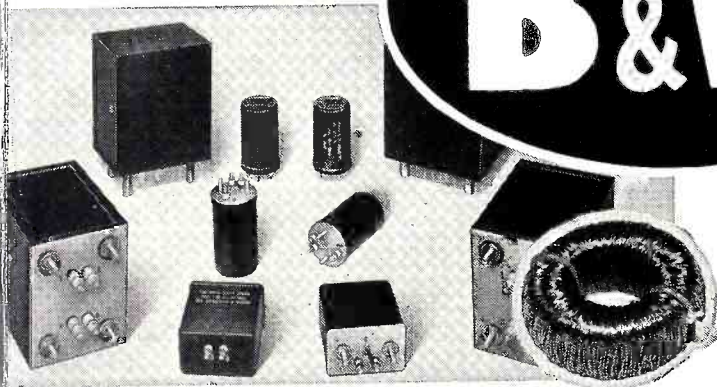


FILTERS — DISCRIMINATORS

B & W high-pass, low-pass, and band-suppression filters and discriminators for R-F or audio filtering meet a broad range of special design and performance requirements. For extremes of temperature and humidity these units are available to meet Mil-T-27 specifications.

ity these units are available to meet Mil-T-27 specifications.

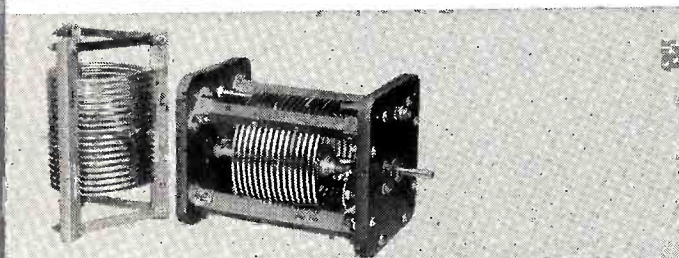
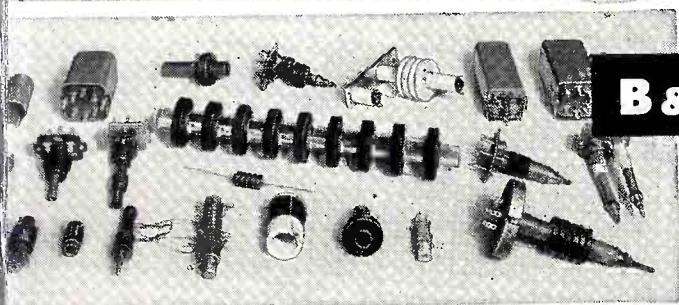
TOROIDS. B & W offers full facilities for the design and manufacture of Toroidal coils in ranges up to 200 KC, with inductance and Q values to specific requirements. Available in hermetically sealed cases, potted or unmounted.



B & W SPECIAL COMPONENTS

INDUSTRIAL COILS. Single-layer solenoid coils • Universal-wound coils of single, multiple pie, and progressive construction • R-F, I-F, and Oscillator coils • Traps, R-F and Delay line chokes—are but a few of many types B & W is equipped to design and build to meet specific needs.

EDGEWOUND COILS. B & W rotary and fixed heavy-duty edgewound copper inductors are available in stock or custom-built models for high-power transmitters, R-F heating equipment, antenna phasing networks and other radio and electronic apparatus. Various inductance and current ratings are available in both types. Fixed or rotating links can be supplied on special models.



BARKER & WILLIAMSON, INC.

237 Fairfield Ave., Upper Darby, Pa.



SILVER GRAPHALLOY BRUSHES

Silver GRAPHALLOY Brushes have been widely used because of LOW and CONSTANT CONTACT DROP, EXTREMELY LOW ELECTRICAL NOISE and LONG LIFE . . . especially for *rotating strain gages, thermocouple circuits, synchros, guided missiles, fire control equipment, transducers, radar and sonar equipment, servo-mechanisms, selsyns and dynamotors.**

The GRAPHALLOY process was patented 40 years ago and the name GRAPHALLOY has been our copyrighted trademark since that time. While this company has been selling GRAPHALLOY for the past 40 years recent developments have added materially to its properties. Over 30 grades are now used in a wide variety of applications. Silver GRAPHALLOY Brushes on 1/2"-diameter coin silver slip rings have been used successfully in highly critical electrical circuits at speeds up to 100,000 R.P.M. *Our Engineering Department will assist in determining the exact grade of GRAPHALLOY for your needs.*

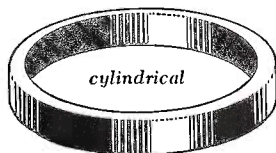
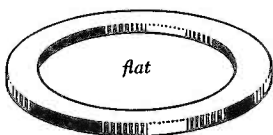
BRUSH AND SPRING ASSEMBLY

Silver GRAPHALLOY Brushes are available for the standard Brush Holders described in the next column. Springs are supplied, as part of the assembly, to give the correct brush pressure for each brush application. Shunts are provided where necessary to insure extremely low electrical noise level and for carrying heavy currents.



COIN SILVER SLIP RINGS

Standard Coin Silver Slip Rings, both *cylindrical* and *flat* types, are illustrated below. We recommend the cylindrical type ring with three brushes per ring . . . spaced at 120°. The cylindrical type are designed for press fitting over standard steel shafting. The flat type rings are designed for nesting either on an insulated plate or for molding into insulation. Insulated slip rings of either type or slip ring assemblies can be furnished with leads attached.

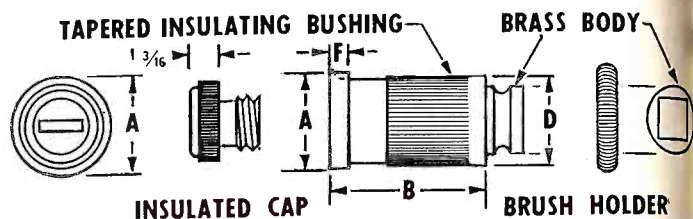


Standard "Flat" rings have 1/4" radial contact surface and 1/8" radial spacing between adjacent rings.

Part No.	OD	ID	Thickness	Part No.	OD	ID	Width
168-20	1 1/4	3/4	3/16	116-4**	1/4	.127 / .123	3/16
168-32	2	1 1/2	3/16	116-6**	3/8	.252 / .248	3/16
168-44	2 3/4	2 1/4	3/16	116-8**	1/2	.377 / .373	3/16
168-56	3 1/2	3	3/16	116-10**	5/8	.502 / .498	3/16
168-68	4 1/4	3 3/4	3/16	116-12**	3/4	.627 / .623	3/16
168-80	5	4 1/2	3/16	116-14**	7/8	.752 / .748	1/4
168-92	5 3/4	5 1/4	3/16	116-16**	1	.877 / .873	1/4
168-104	6 1/2	6	3/16	116-18**	1 1/8	1.002 / .998	1/4
168-116	7 1/4	6 3/4	3/16	116-19	1 1/4	1.000 / .996	1/4
168-128	8	7 1/2	3/16	116-23	1 1/2	1.250 / 1.246	1/4
168-140	8 3/4	8 1/4	3/16	116-27	1 7/8	1.500 / 1.496	1/4
168-152	9 1/2	9	3/16	116-35	2 1/8	2.000 / 1.996	1/4
168-164	10 1/4	9 3/4	3/16	116-43	2 1/2	2.500 / 2.496	1/4
168-176	11	10 1/2	1/4	116-52	3 1/4	3.000 / 2.996	5/16
168-188	11 3/4	11 1/4	1/4	116-60	3 3/4	3.500 / 3.496	5/16
168-200	12 1/2	12	1/4	116-68	4 1/4	4.000 / 3.996	5/16
168-212	13 1/4	12 3/4	1/4	116-76	4 3/4	4.500 / 4.496	5/16
168-224	14	13 1/2	1/4	116-84	5 1/4	5.000 / 4.996	5/16
168-236	14 3/4	14 1/4	1/4	116-92	5 3/4	5.500 / 5.496	5/16
168-248	15 1/2	15	1/4	116-102	6 1/8	6.000 / 5.996	5/16
168-250	16 1/4	15 3/4	3/16	116-118	7 1/8	7.000 / 6.996	5/16
168-262	17	16 1/2	3/16	116-134	8 3/8	8.000 / 7.996	5/16
168-274	17 3/4	17 1/4	3/16	116-150	9 3/8	9.000 / 8.996	5/16
168-286	18 1/2	18	3/16	116-166	10 3/8	10.000 / 9.996	5/16
168-298	19 1/4	18 3/4	3/16				
168-300	20	19 1/2	3/16				

**Coin silver .025 thick inlaid over brass.

BRUSH HOLDER AND CAP



Brush Holder and Cap No.	Brush Size	Suggested Slip Ring Width	Distance Brush Holder to Slip Ring	*Mounting Hole Diameter	A. Shoulder Dia.	B. Overall Length without Cap	D. Bushing Maximum Dia.	F. Flange Thickness
14326	1/8 sq.	3/16	1/16	1 3/32	.430	7/8	.425	3/32
11509	5/32 sq.	3/16	1/16	1 3/32	.430	7/8	.425	3/32
11570	3/16 sq.	1/4	1/16	7/16	.469	7/8	.450	3/32
11527	1/4 sq.	7/16	1/8	9/16	.616	1 5/16	.578	1/8

Other sizes available.

*Mounting hole diameter for Brush Holder dimension D.

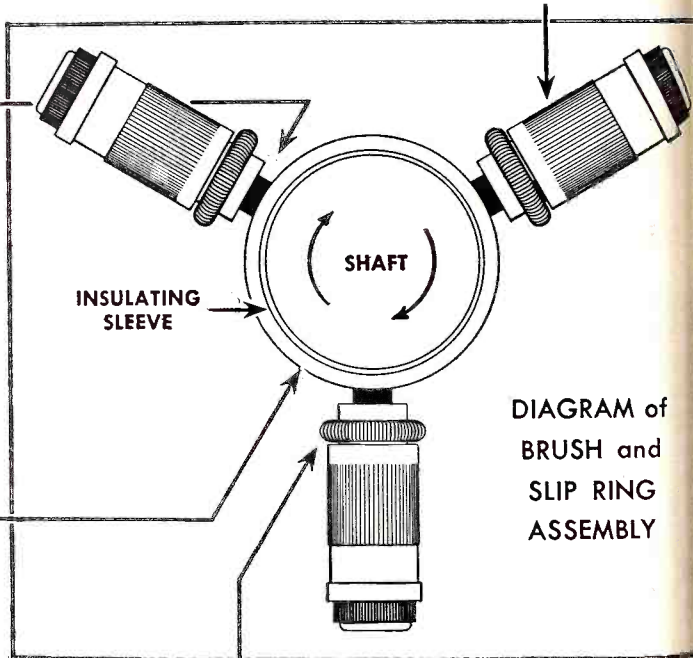


DIAGRAM OF BRUSH and SLIP RING ASSEMBLY



CONNECTORS (GARTER SPRINGS)

These silver plated coil spring Connectors make for positive electrical connection to the brass body of the brush holder by snapping into the groove on the holder. The connecting lead can be pre-soldered to the Connector.

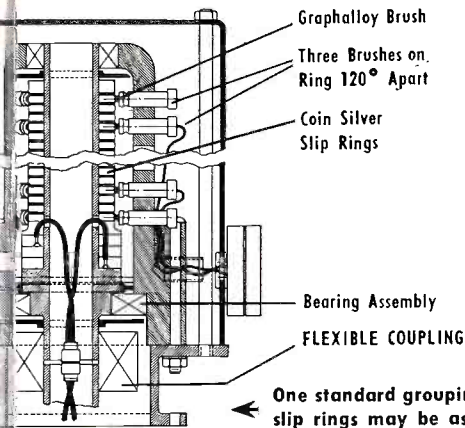
Garter Spring Connectors	Brush Size	Brush Holder No.
127-9	1/8 sq.	14326
127-9	5/32 sq.	11509
127-10	3/16 sq.	11570
127-14	1/4 sq.	11527

***CALL ON OUR 40 YEARS OF DESIGN EXPERIENCE FOR HELP IN SOLVING YOUR BRUSH PROBLEMS!**

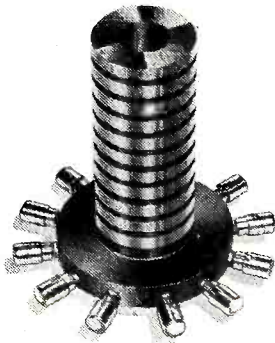
and SILVER GRAPHALLOY Brush assemblies

for your "TOUGH"
electrical
requirements

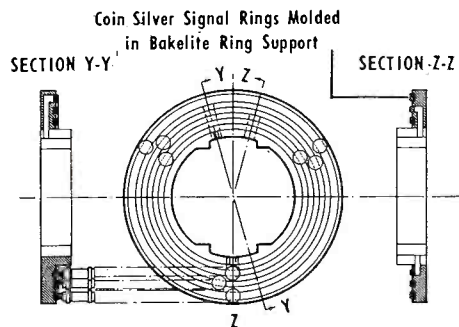
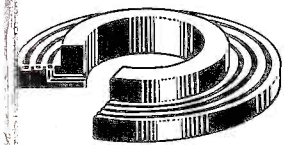
CYLINDRICAL SLIP RING and Brush Holder Assembly



CYLINDRICAL SLIP RING ASSEMBLY



FLAT SLIP RING ASSEMBLY



ing equipment, the measure-
changes in resistivity or emf
brought out by means of slip
and brushes. To obtain intelli-
formation under these condi-
extraneous circuit noise level
kept below the signal level.
ver GRAPHALLOY Brushes, in
ation with Coin Silver Slip
reduce the extraneous noise
extremely low values, they have

been used extensively in rotating strain
gage and thermocouple applications.
Noise levels as low as 20-50 microhms
in a 100-ohm circuit have been obtained
with Silver GRAPHALLOY Brushes. (*We
will develop and manufacture your
complete assembly!*) Commutators and
choppers for the production of square
wave signals or for pulse systems can
be manufactured to meet your circuit
requirements.

GRAPHALLOY CONTACTS

oy, because of its inherent non-welding
franching characteristics, is used widely
as . . . especially where positive break-
quit is required.



GRAPHALLOY BUSHINGS

With military requirements demanding operation
from -80° to $+200^{\circ}$ F., GRAPHALLOY Bushings,
which are inherently oilless, have been used suc-
cessfully in potentiometers, synchros, cameras,
and missiles. Properly designed GRAPHALLOY
Bushings will take considerable shock (50 g.).
They have replaced oil-lubricated bushings for
the following reasons:

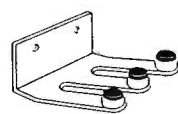
- 1) Lower friction at room temperatures.
- 2) No oil to solidify at low temperatures.
- 3) No oil to carbonize at prolonged elevated temperatures.

GRAPHALLOY BRUSHES

are used on
such equipment as . . .

- SERVO SYSTEMS
- SYNCHROS
- SELSYNS
- CHOPPERS
- RADAR
- GYROS
- INVERTERS
- PULSE SYSTEMS
- GUIDED MISSILES
- DIGITAL COMPUTERS
- WAVE GUIDES
- SONAR
- TRANSDUCERS
- TORQUE INDICATORS

"We Specialize in
Special Designs"

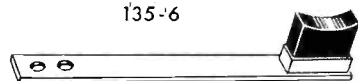


135-18



135-10

135-6



Our Engineering Department
will develop or
assist you in developing
special components
and assemblies.

GRAPHITE METALLIZING CORPORATION

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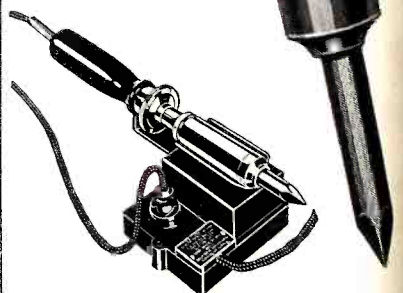
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are sturdily built
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type tips and are
constructed on
the unit sys-
tem with each
vital part,
such as heat-
ing element,
easily remov-
able and re-
placeable. In
5 sizes, from
50 watts to
550 watts.

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This is a thermostatically
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ture of an electric soldering
iron. When placed on and
connected to this stand,
iron may be maintained at
working temperature or
through adjustment on
bottom of stand at low or
warm temperatures.



For further information or
descriptive literature, write

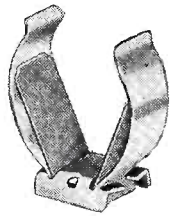
AMERICAN ELECTRICAL
HEATER COMPANY
DETROIT 2, MICH., U. S. A.

**THE BEST ION TRAPS
AT LOWER PRICES**

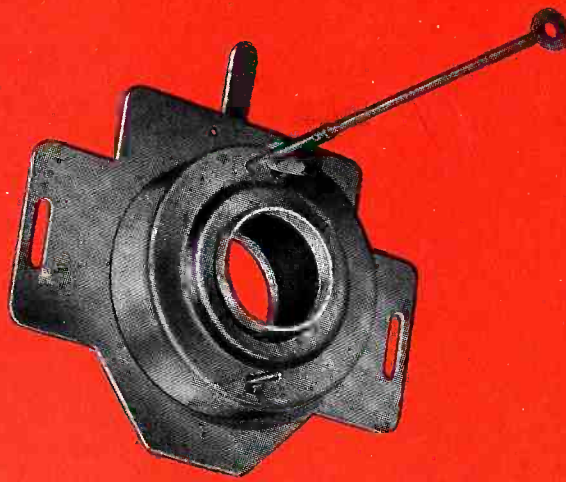
World's Largest Ion Trap Builder
Slip-on Type—Model T-312
 Simplified steel construction lowers manufacturing costs by fully utilizing, in addition, the Alnico Permanent Magnet's maximum efficiency. This makes Model T-312 the **LOWEST PRICED ION TRAP ON THE MARKET.** Installs in 2-3 seconds. Construction with steel tension spring.
 Weighs only 3/5 ounce.

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 Instantly. Just snap on; stays put. Saves valuable production man hours with **EXCLUSIVE** snap-on feature. Reduces your cost because priced below competition. Construction of hardened spring steel.
 Weighs only 1/2 ounce.

Both Models Fit Any TV Picture Tube.
 Heppner has built over 16,000,000 Ion Traps to date and is the world's largest Ion Trap manufacturer.



Model E-437



The most economical way to FOCUS a TV tube
THE ORIGINAL FOCOMAG

CUTS RECEIVER COSTS BY ELIMINATING CENTERING AND FOCUSING RHEOSTATS. Also lowers cost of power transformer. Perfectly focuses 27", 21" and all smaller tubes having magnetic deflection. Highly efficient ring magnet uses only 4 oz. Alnico P.M.

NO HARMFUL EXTERNAL FIELD. Ring magnet is completely enclosed by the external shunt (an original Heppner design). This prevents the leakage field from having any magnetic effect on other components. Uniform field produced by ring magnet.

FLEXIBLE NYLON ADJUSTING SHAFT ELIMINATES BREAKAGE. Picture-positioning lever. You specify mounting arrangement.

REDUCE YOUR SET COSTS...



ALNICO P. M. SPEAKERS
 with exclusive "no-rub" Voice Coil

Absolute uniformity to your specifications because: The **PERFECTLY ROUND "NO-RUB" VOICE COIL** (An **EXCLUSIVE** feature) is manufactured by keeping each coil on a separate hardened steel sleeve during winding and all other pre-assembly operations. Each voice coil is thus perfectly round when installed in the speaker. There are no egg-shaped coils to cause rubs.

ALNICO P.M. SPEAKERS in 3", 3 1/2", 4", 5", 4"x6", 8", 10", and 12" sizes are available. .68 oz., 1 oz., 1.47 oz. or other standard Alnico P.M. sizes. Plugs, transformers and/or brackets to your specifications.

Guaranteed-count Electro-dynamic Speakers

Each field coil used in the Electro-Dynamic line is guaranteed to contain the given number of turns within standard tolerance. Quality is fully controlled because all field coils are wound by Heppner. There are no wire stretching or other quality-reducing shortcuts to cause deviation from the resistance and wire size specified.

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It is tested in both open and closed position before shipment.

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Inductances held to $\pm 1/2$ of 1%. With windings and mountings to your specifications or without mountings.

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Manufactured with exacting control at all stages. Made to your specifications.

To help keep your costs down, call in Heppner engineers to assist in designing and developing new Electro-Magnetic Components. Unusually fast delivery. Write for further information today.

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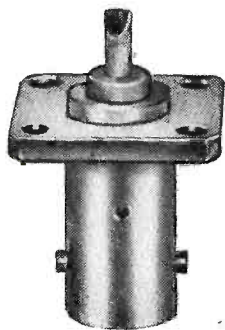
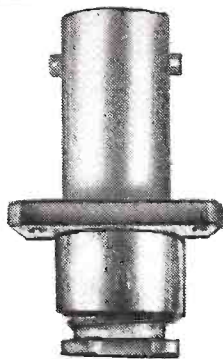
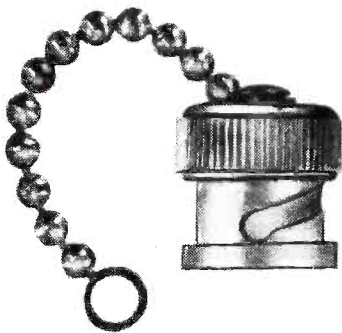
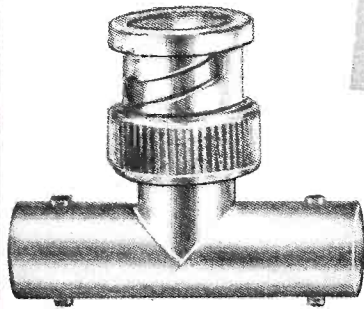
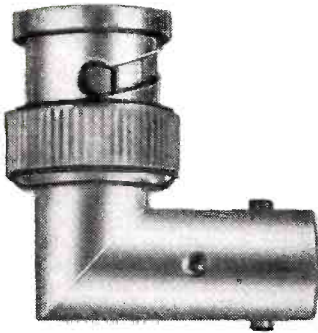
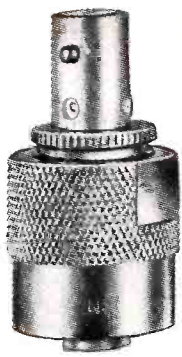
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 408 So. Alvarado St., Los Angeles, Calif.

BNC

CONNECTORS BY KINGS



The BNC Connectors shown are small, lightweight Connectors designed for use with small cables such as RG-58/u, RG-59/u and RG-71/u. Widely used for video and aircraft test equipment, they are recommended for frequencies as high as 3000 M.C., where impedance matching is important. The BNC series is used successfully in the region of microwave frequencies.

Whether your connector requirements call for the BNC series, N series, the new C series or special adaptations of standard connectors, you can rely on Kings. Our staff of highly specialized engineers invite your inquiries.



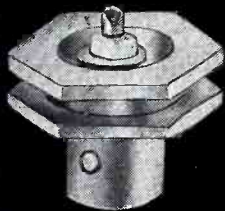
KINGS *Electronics* CO., INC.

40 MARBLEDALE ROAD, TUCKAHOE, N. Y.

IN CANADA: ATLAS RADIO CORP., LTD., TORONTO

CONNECTORS

by **KINGS**



UG-569/U



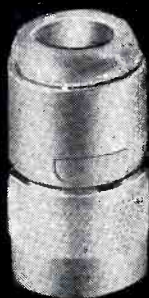
UG-572/U



UG-643/U



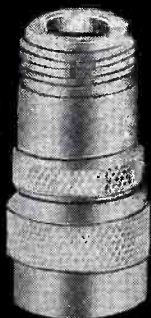
UG-571/U



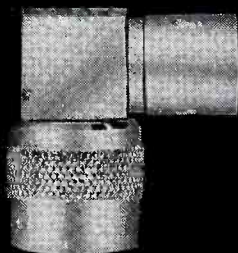
UG-573/U



UG-564/U



UG-565/U



UG-567/U

C Series Connectors are a greatly improved mechanical and electrical type of co-axial connector. They are constant impedance and are designed for use with 50 ohm, middle size RF cables.

The C Series like every co-axial connector made by Kings is the result of constant research and development. Engineering ingenuity and precision manufacture have put "Connectors by Kings" in the front-line of communications equipment for industry and the armed services.

If you have a connector problem consult Kings. You'll be glad you called on Kings first.



KINGS *Electronics* CO., INC.

40 MARBLEDALE ROAD, TUCKAHOE, N. Y.

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complete stocks . . .

Nine floors of a tremendous inventory of parts and equipment to expedite your development project or keep your production line rolling.

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Efficient business operation and large scale purchasing enables us to sell everything at the lowest possible prices.

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A single order to Harrison brings you the products of over 200 leading electronic parts and equipment manufacturers.

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for ALL Your
Electronic Equipment



Bill Harrison

Here's the heart of our Industrial Department — your team of experienced electronics specialists equipped to make your purchasing of electronic parts and equipment, Fast . . . Easy . . . Thrifty!

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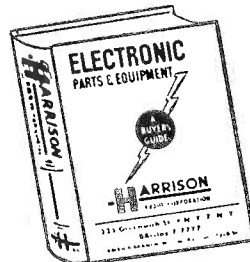


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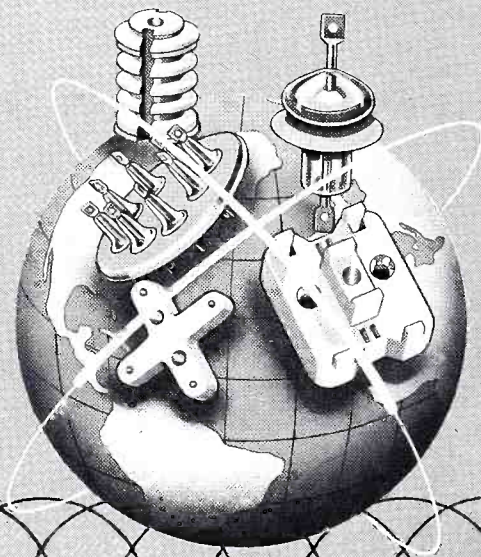
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Stupakoff

PRODUCTS

FOR THE WORLD OF ELECTRONICS

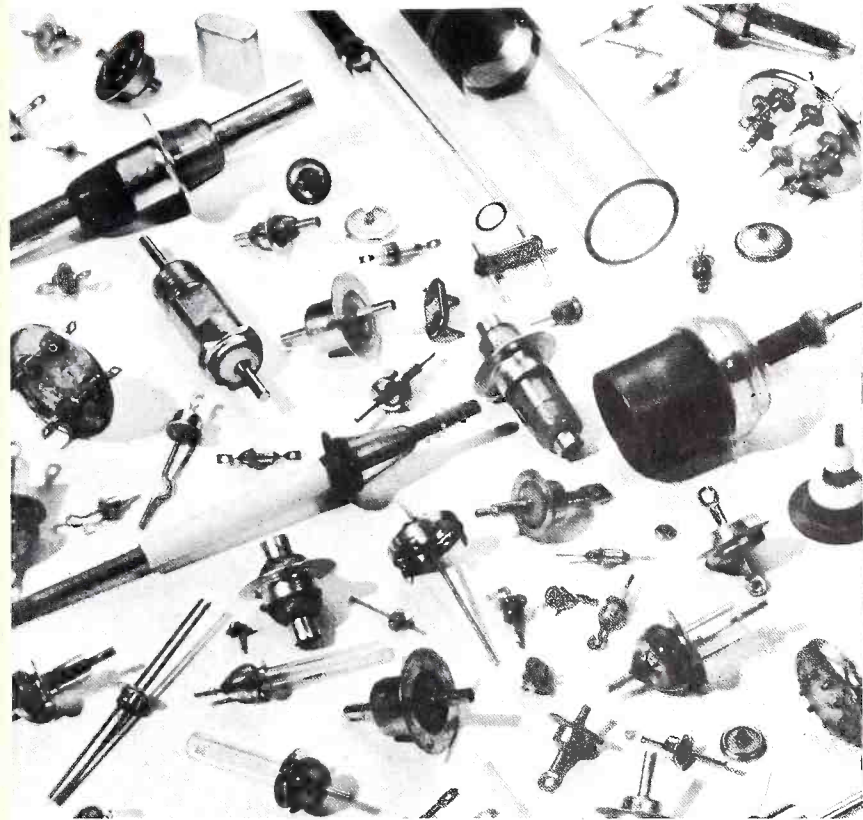


Stupakoff

CERAMIC & MFG. CO.

LATROBE, PENNSYLVANIA

GLASS-TO-METAL SEALS

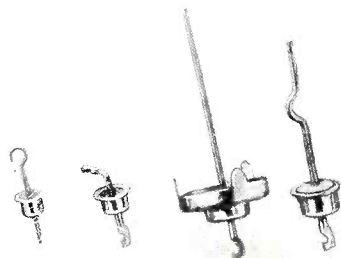


Perfectly closed and durable air-tight assemblies are made with Stupakoff Kovar-Glass Seals. The use of hard glass for these seals insures the highest degree of protection against thermal shock and weathering.

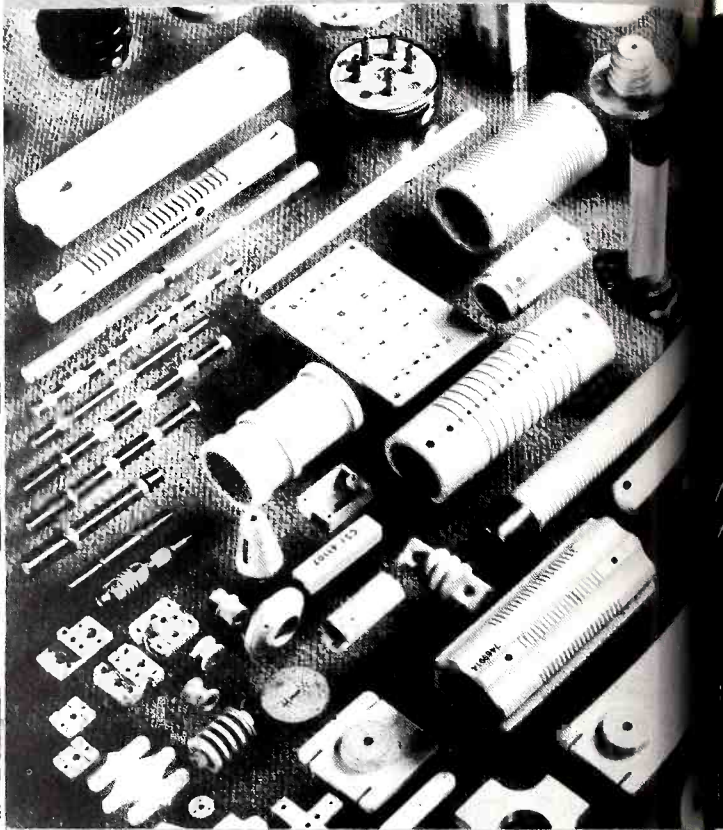
Among the various types of standard Stupakoff Kovar-Glass Seals are: Single Terminal, for all feed-through applications requiring a single electrode with tubular, solid or flattened and punched center lead; High Voltage, for special feed-through application where higher voltage-flashover and surface leakage ratings are required; Stand-off Terminals, specially useful as test and connection points; Strain-Relief Terminals, patented design developed especially for welding and brazing; Multi-Header Terminals, for applications requiring a number of terminals in a limited area.

In addition, Stupakoff designs and makes special seals for use where standard designs are not applicable. All types are readily produced in large or small quantities as required.

Stupakoff Kovar-Glass Seals are fully described in our new catalog, 453, sent free upon request.



STEATITE AND OTHER CERAMICS



Stupakoff is a leading manufacturer of ceramic products for electrical and electronic applications for all voltages, frequencies and temperatures. Parts are made of Alumina, Cordierite, Forsterite, Magnesia, Porcelain, Zircite, Titanates, Stupalith and Steatite—plain, ground, metallized or assembled.

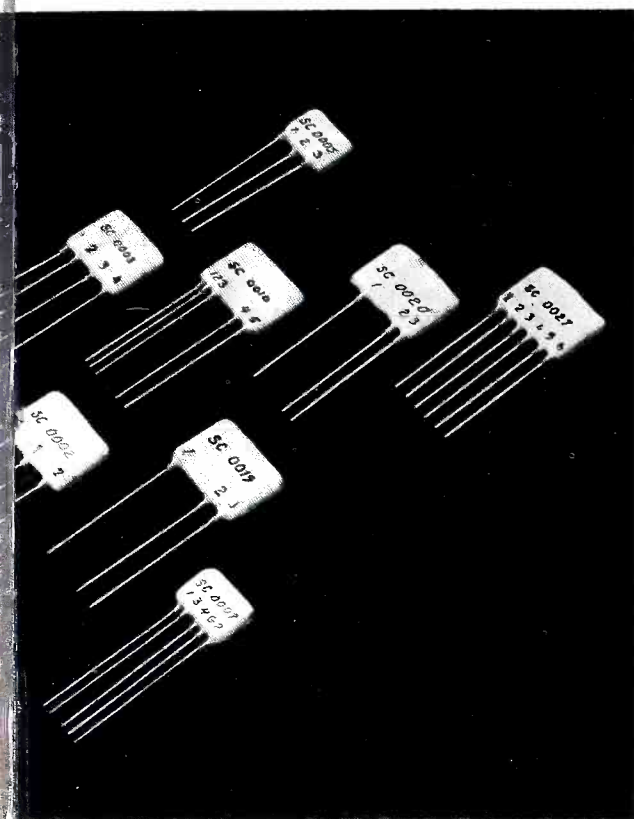
Where thermal shock conditions prevail, parts made of Stupalith will withstand extremely severe service. Stupalith parts range in weight from a fraction of an ounce to several pounds, and are made in simple or intricate shapes, by pressing, extrusion, casting or ramming. Safely used at temperatures up to 2400 F.

Stupakoff Temperature-Sensitive Resistor Ceramics are used for temperature indicating and measuring equipment such as Radiosonde, for infrared light source and for heating elements. Supplied complete with terminals, in the form of rods, tubes, discs, bars, rings, etc.

For by-pass, lead-through blocking, standoffs and trimmer applications; also for temperature-compensating service, Stupakoff offers Ceramic Dielectric materials having coefficients from P-100 to N-2700 and high K materials up to K-6000. Made in the form of tubes, discs, and special shapes, plain or silvered.

Steatite products are fully described in catalog 951; data on other materials will be furnished upon request.

PRINTED CIRCUITS



...ning in one compact, sealed unit a specified
of prewired resistors and capacitors of pre-
...ues, Stupakoff Printed Circuits save space
...nt, speed assembly, reduce costs, minimize
...errors. The resistors and capacitors are
...in circuits designed in accordance with the
...ents of individual applications. By using
...Printed Circuits instead of the individual
...nts, soldered connections are reduced up
...assemblies are lighter and more compact,
...mbly time is reduced and better products

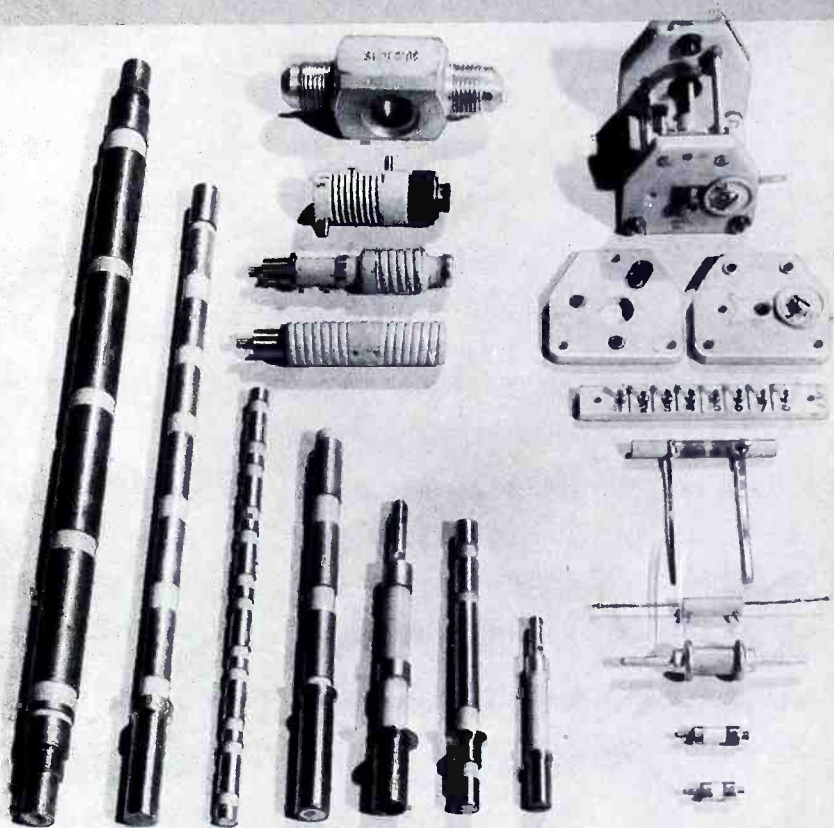
...sturdy, compact, accurately produced units
...in many sizes, a typical one being 1 x 1½ x
... (as leads).

...as for resistors, capacitors and conductors
...ated" on vitreous high-dielectric ceramic
...permanently bonded to the ceramic surface
...olled curing, and protected from abrasion
...idity by a tough, impervious plastic coating.
...leads are soldered in place, ready for con-
...to the assembly.

Write for bulletin 1151,
containing complete spe-
cifications of a number of
typical standard circuits
and detailed information
on the design and con-
struction of Stupakoff
Printed Circuits.



CERAMIC-METAL ASSEMBLIES



Stupakoff specializes in the application of metal to ceramic parts for a variety of purposes, such as metallized ceramic induction coils for radio receivers and transmitters; metallized ceramic shafts for air-tuning condensers; metallized plates for making fixed rigid assemblies; printed circuits; ceramic trimmer condensers; terminals and terminal boards; strain and lead-in insulators; and many other ceramic-to-metal products.

To combine ceramic and metal parts into one permanent unit, Stupakoff utilizes extensive experience with both materials. Methods of assembly employed by Stupakoff include: metallizing, soldering, pressing, spinning and others. Among the metals assembled to ceramics are silver, copper, brass, stainless steel, monel and Kovar.

Stupakoff high-precision ceramic assemblies offer many opportunities to reduce costs, increase production and improve electrical and electronic equipment. Full details will gladly be sent upon request.



Western Electric

16 YEARS

SPERRY

13 YEARS

Bomac

6 YEARS

MACHLETT

15 YEARS



18 YEARS



7 YEARS



11 YEARS



VARIAN
associates

5 YEARS



18 YEARS



18 YEARS



18 YEARS

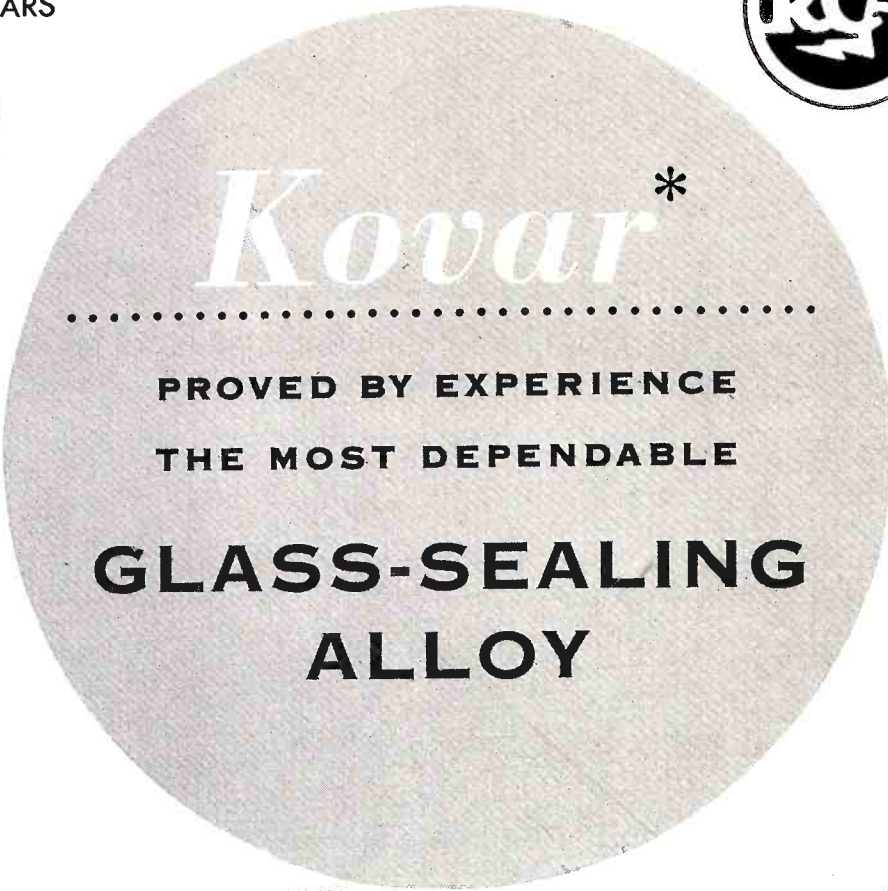


18 YEARS



TUBES

13 YEARS



Kovar*

PROVED BY EXPERIENCE

THE MOST DEPENDABLE

**GLASS-SEALING
ALLOY**

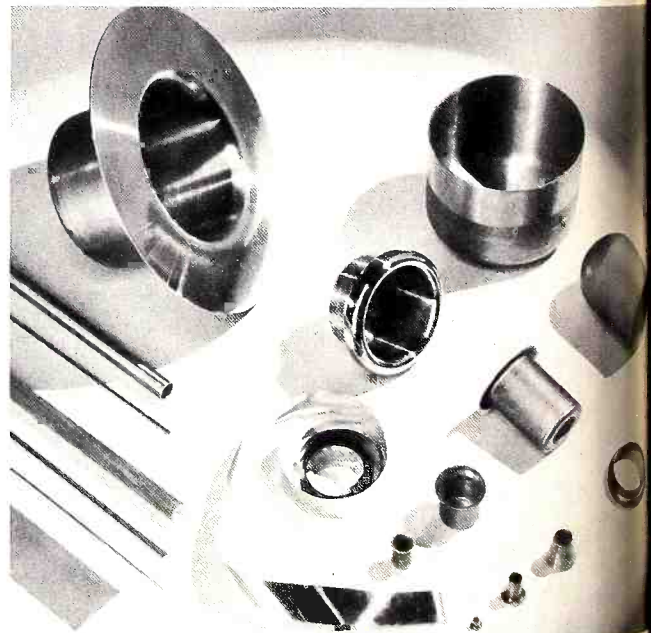
The ideal alloy for glass sealing, Kovar matches the expansivity of certain hard glasses over the entire working temperature range. It resists mercury attack, has ample mechanical strength and seals readily with simple oxidation procedure. It is available as sheet, strip, foil, rod, tube, wire—or fabricated into cups, eyelets, leads and other shapes. The prominent users of KOVAR and the length of time they have employed this metal are convincing proof of satisfaction.

Kovar is a cobalt, nickel, iron alloy, manufactured under very carefully controlled conditions. It attributes its success to the following characteristics:

1. Seals readily into hard or thermal shock resistant type glass.
2. Has substantially the same expansivity as the glass from -80° C to the annealing point of the glass.
3. Produces a permanent vacuum tight seal.
4. Is readily machined or fabricated to permit the use of small and intricate shapes.
5. Is of controlled composition to permit duplication of results.
6. Resists mercury attack.
7. Is usable in any thickness; no need to feather edge on tubular or intricate shapes.
8. Is relatively inexpensive, eliminating restraints on sizes and capacity.
9. Can be welded, soldered, and brazed to other metals.

Full information on the use of Kovar is given in Stupakoff Bulletin 145, which we will send upon request.

*Westinghouse Trade Mark No. 337,962



Supplied by **Stupakoff**

in the form of: SHEET, ROD, WIRE, FOIL, TUBING, EYELETS,
LEADS and FABRICATED SHAPES

STUPAKOFF CERAMIC & MFG. CO.

LATROBE, PENNSYLVANIA

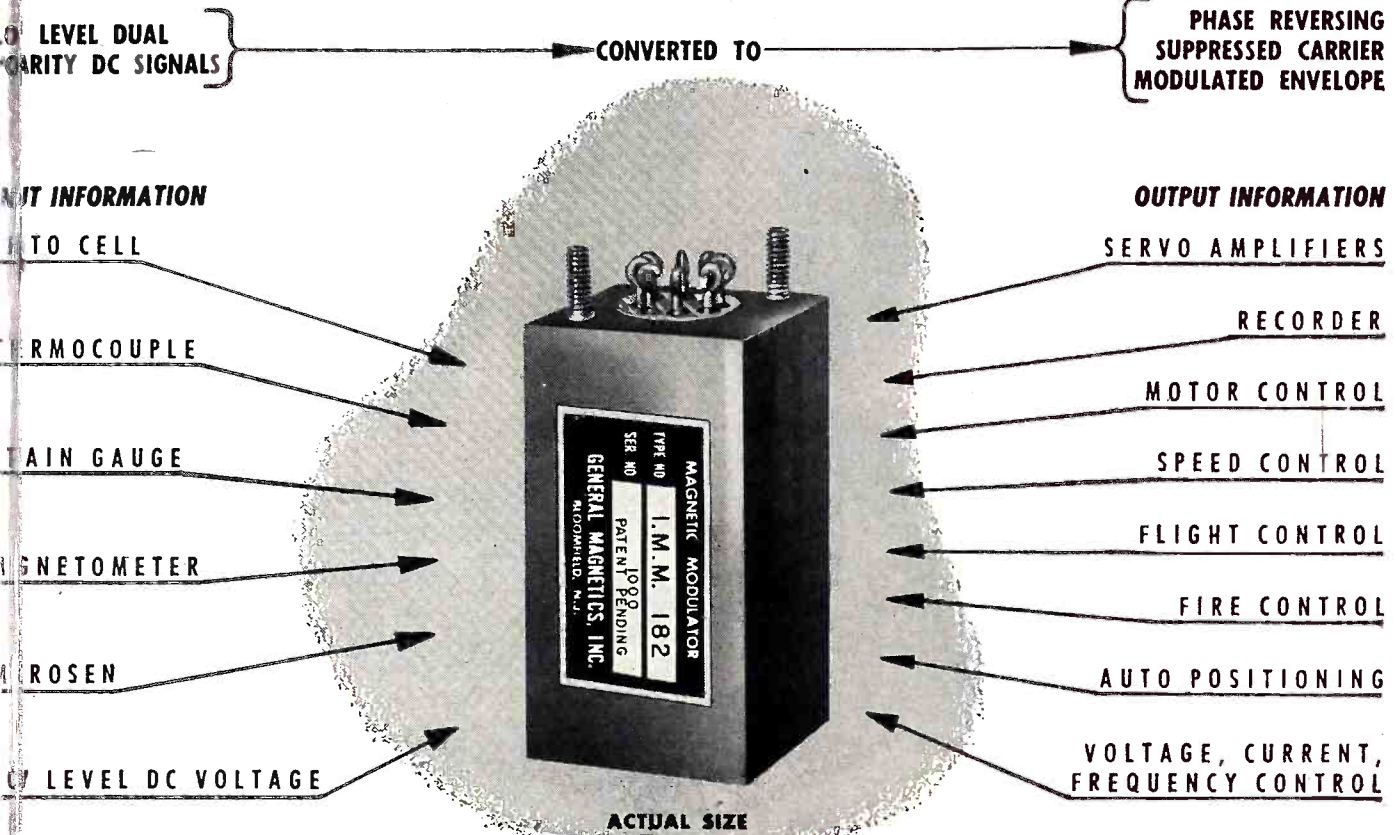
DC to AC Conversion — No moving parts or filaments

with the

MAGNETIC MODULATOR

Now Available in 60 and 400 Cycle Designs

CONVERTER WITH HIGH SHOCK AND VIBRATION RESISTANCE AND PRACTICALLY UNLIMITED LIFE—OPERATION IN AMBIENT TEMPERATURES FROM -55°C TO $+200^{\circ}\text{C}$



Magnetic Modulator is designed to convert low level dual polarity DC signals into AC signals of corresponding amplitude and phase. A descriptive list of specifications is shown in table to the right.

TYPICAL SPECIFICATIONS

Weight 4 oz. Output impedance 5,000 ohms
 Temp. rise negligible Output at null 10 mv. rms. max.
 Life unlimited Output phase... 0 or 180 ± 5 deg.
 Harmonic Distortion Less than 10%, above 0.1V output

We specialize in control systems and MAGNETIC AMPLIFIER components for automatic flight, fire control, analog computers, guided missiles, nuclear applications, antennas and gun turrets, commercial power amplifiers, and control systems.

Parameter	Input Modulators		Thermocouple & Strain Gage Converters	
Type No.	IMM-249	IMM-182	MTC-247	MTC-210-HF
Frequency	60 Cycles	400 Cycles	60 Cycles	400 Cycles
Impedance Winding	4000 Ohms	2000 Ohms	100 Ohms	60 Ohms
Excitation	5V RMS	0.7 V RMS	1.0V RMS	0.8V RMS
Control Signal DC	0 to $\pm 400\mu\text{A}$	0 to $\pm 40\mu\text{A}$	0 to ± 30 Millivolts	0 to ± 20 Millivolts
Output	0-2 Volts RMS Phase Reversing	0-1V RMS Phase Reversing	0-0.8V RMS Phase Reversing	0-1.0V RMS Phase Reversing
Dimensions, In.	$1\frac{1}{32} \times 1\frac{1}{32} \times 2\frac{1}{8}$	$1\frac{1}{8} \times 1\frac{1}{8} \times 2\frac{1}{8}$	$1\frac{1}{32} \times 1\frac{1}{32} \times 2\frac{1}{8}$	$1\frac{1}{32} \times 1\frac{1}{32} \times 2\frac{1}{8}$
Graphical Curve				

GENERAL
135 Bloomfield Ave.



MAGNETICS
Bloomfield, N. J.

KOBZY PRODUCES THAT ALL IMPORTANT QUALITY

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★ The variety of Kobzy Standard Products is so extensive that most requirements for television or other electronic purposes are easily met. We are geared to give prompt cooperation in the matter of special parts, in accordance with your definite specifications.

This experienced, modernly equipped organization has worked closely with engineers and designers in the radio and electronic industries for years. Get the benefits that come thru the use of Kobzy practical designs — get Kobzy quality into your quality products.

Keep a copy of the Kobzy Catalog handy for reference. We'll gladly send you one upon request.

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TOOL CO.**
1539 DAYTON ST.
CHICAGO 22, ILLINOIS

ELECTRONIC ENGINEERS

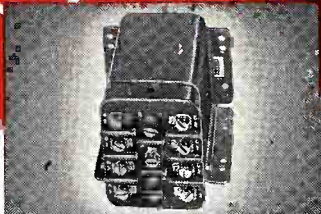
Specify

GUARDIAN

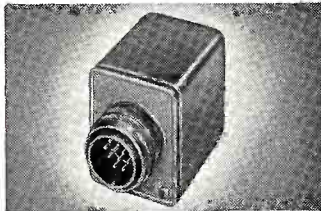
HERMETICALLY SEALED RELAYS

TV DEFLECTION YOKES AND FOCUS COILS

- NEAT
- EFFICIENT
- EASY-TO-SERVICE
- VIBRATION-PROOF



THE SCREW TERMINAL TYPE



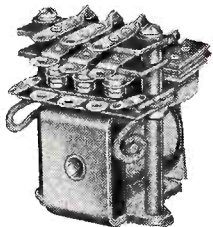
THE A. N. CONNECTOR TYPE



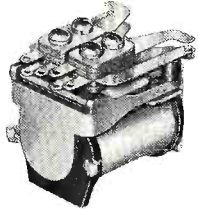
THE OCTAL PLUG TYPE



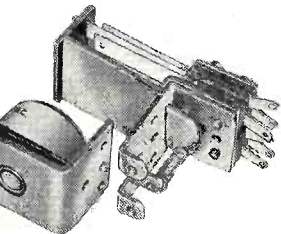
THE LUG HEADER TYPE



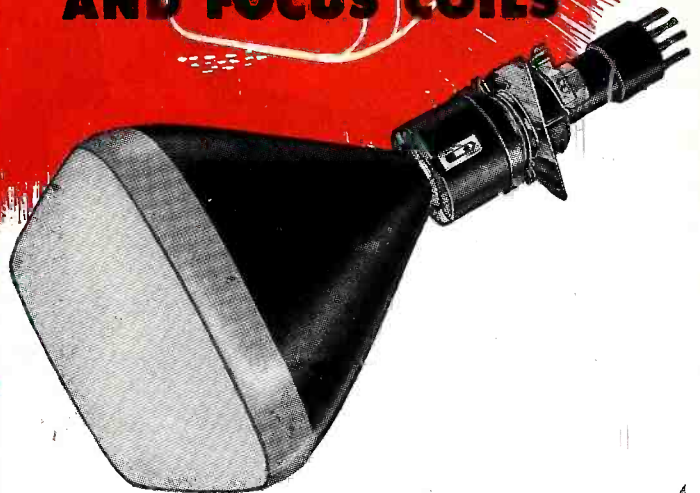
SERIES 335 RELAY



SERIES 595-P RELAY

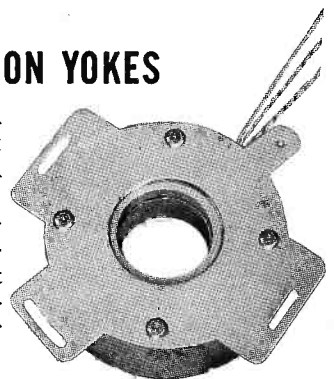


SERIES 200 RELAY WITH INTERCHANGEABLE COIL



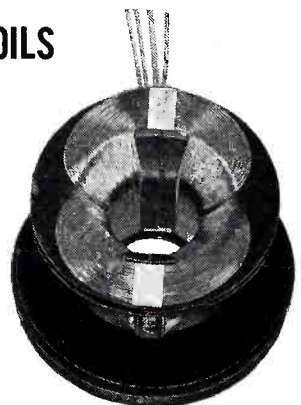
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Wound to form by a special process eliminating neck shadows, wire stresses and the usual difficulties encountered with power forming methods. Highest quality performance assured at lowest possible cost. Available from production for 70° or 90°.



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Over a million Focus Coils have rolled off Guardian's production lines into TV sets of leading manufacturers. With more than 75 types established as *Guardian Standard*, speedy delivery to meet today's replacement needs is a matter of routine.



valuable information on HERMETICALLY SEALED Guardian Relays is yours for the asking. Write on your business letterhead for new completely descriptive and illustrated Catalog 5-H. No cost. No obligation.

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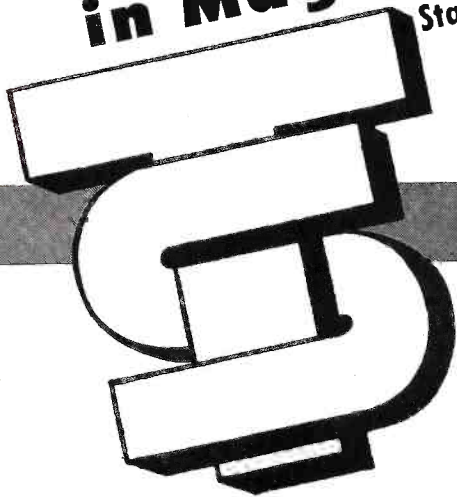
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Specialists in Magnetic Materials

Standard Designs—Special Shapes



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Magnet Design—Bulletin 151. Written for the design engineer. Covers application, properties, design problems and testing of permanent magnets.

Standard Magnets—Catalog SM-1252. Complete data with dimensional drawings of standard magnets offered from stock for working models, small requirements, without special tooling.

Core Materials

Laminations—Bulletin L-752. Data on stamped silicon-iron laminations covering material applications, general specifications, typical value graphs. Also covers T & S OrthoSil oriented materials.

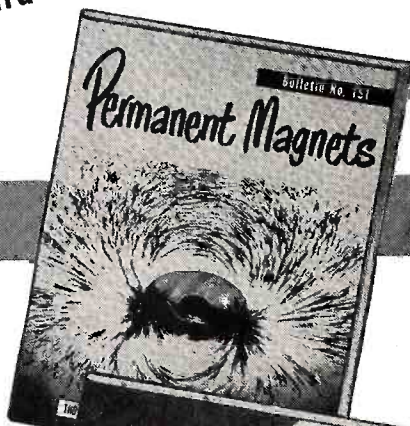
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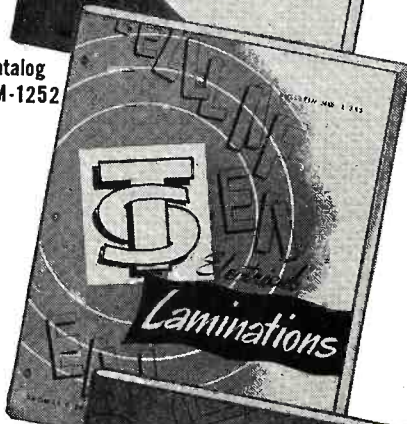
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Bulletin 151



Catalog SM-1252



Bulletin L-752



Bulletin WC-353

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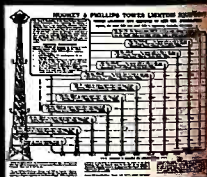
H. & P. kits include every component part—from beacon lights to smallest nut—packaged and delivered ready for installation on your tower.

H. & P. kits and equipment meet ALL F.C.C. specifications.

H. & P. kits are available for every tower height from 50 to 1500 feet.

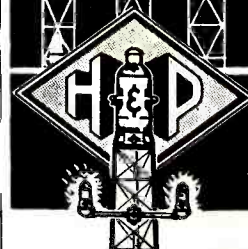
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"LEADERS
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LIGHTING"



**HUGHEY &
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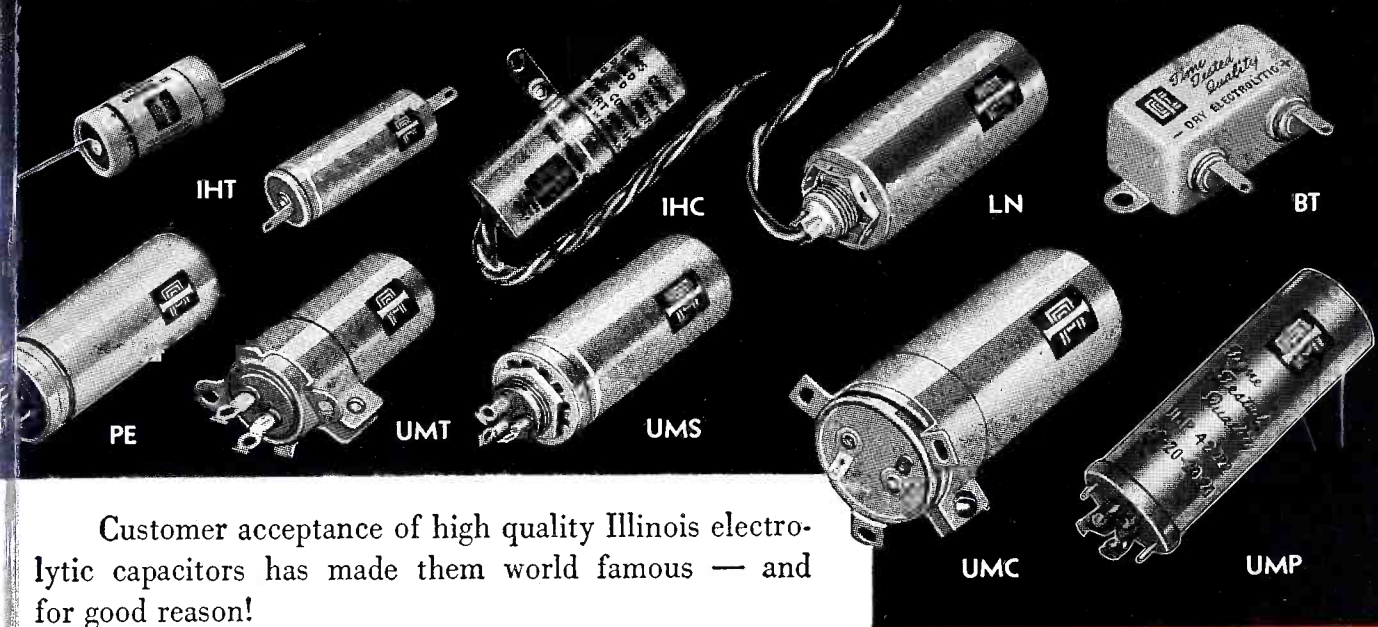
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*Millions in Use -
Thousands Prefer*

ILLINOIS ELECTROLYTIC CAPACITORS

...A COMPLETE CAPACITOR LINE OF TIME-TESTED QUALITY!



Customer acceptance of high quality Illinois electrolytic capacitors has made them world famous — and for good reason!

For more than 19 years, ILLINOIS CONDENSER COMPANY has lead the field in new developments, bringing even greater dependability and longer life to these capacitors of "Time Tested Quality".

There is an Illinois electrolytic capacitor for every application. Listed below are only a few of the more popular Illinois types. Write for new Illinois catalog — now!

UMT Specifically designed for use in high quality equipment. Complete line meets all government JAN specifications. Hermetically sealed, shock resistant. Newly designed molded capacitor design and terminal construction.

UMS Inverted screw mounting, hermetically sealed. Entire line fully meets all government JAN specifications.

UMC Popular for use in telephone equipment, power factor correction voltage stabilization, high current energy sources, motor starting and other types of phase shifting networks. Available in capacity ranges up to 10,000 MFD and from 5 to 500 W.V.D.C.

UMP Ideal for communication, radio and TV. Standard twist prong mounting. Uses recently developed molded capacitor construction and will operate efficiently under wide temperature ranges. Remains stable under all operating conditions. Available in capacity ranges from 40 to 3,000 MFD and from 10 to 525 W.V.D.C.

This popular pigtail type in aluminum can features internal riveted construction that assures immunity to shock vibration. Available with or without cardboard insulating sleeve, with tinned wire leads or solder lugs in capacity ranges from 1 to 2,000 MFD from 3 to 700 W.V.D.C.

Ideal for replacement or original equipment, this type has flexible wire leads, is sealed with high temperature compound, has electrolytic grade cardboard tubes and has radial or tangential leads attached. Supplied in common single, four section types or dual negative with separate cathodes. Available in capacity ranges from 25 to 250 MFD from 5 to 500 W.V.D.C.

LN Has screw neck type mounting, extruded aluminum cans and is available in 1" to 1½" diameters. Capacity ranges from 8 to 80 MFD and from 450 to 600 W.V.D.C.

BT (Bathtub) Developed for military, fixed and portable communication equipment. Has hermetically sealed, drawn metal case with corrosion resistant finish. Will stand shock and vibration. Fully meets government JAN specifications. Available in any capacity range required and from 25 to 600 W.V.D.C.

PE For use in all communication equipment, fixed and mobile. Plug-in octal base, hermetically sealed. Features new molded through pin design. Available in types to meet all government JAN specifications.

ILLINOIS CONDENSER CO.
1616 N. THROOP ST., CHICAGO 20, ILLINOIS

EXPORT DEPT., 15 MOORE ST.,
NEW YORK 4, N. Y.
CABLE "MINTHORNE"

Only One Source gives you Double Duty TV!

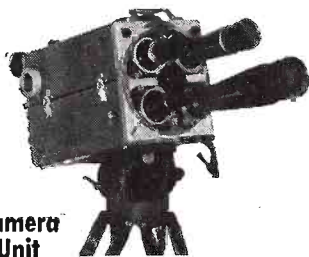
Highest Quality Studio
Programming Resources — plus



Portable Packaging for Maximum
Studio-Field Flexibility!

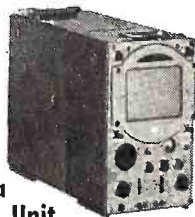
When you invest in GPL TV *studio* equipment, you're buying *field* equipment as well. Every GPL unit provides unparalleled flexibility, light weight, easy handling, precise control. Let GPL engineer *your* station, from camera to antenna. Have *The Industry's Leading Line* — in *quality*, in *design*.

Camera Chain Model PA 600



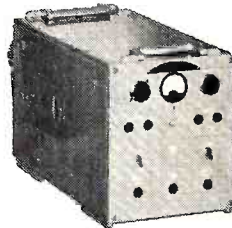
Camera Unit

Precision-built, lightweight, fast-handling. Push-button turret, remote iris control, remote focus and range selection. Easiest to service.



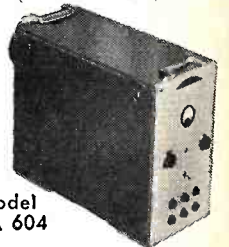
Camera Control Unit

Touch-identified controls. 8½" monitor tube. Split or single headphone intercom system. CRO views horizontal, vertical, and vertical sync block. Iris control.



Camera Power Unit

Rugged, dependable, compact. Matched to other units in GPL chain. Standard relay panels swing out for maintenance.



Model PA 604

Synchronizing Generator

Affords maximum circuit reliability without operator adjustment. Binary counters and delay lines, stable master oscillator. Built-in power supply.

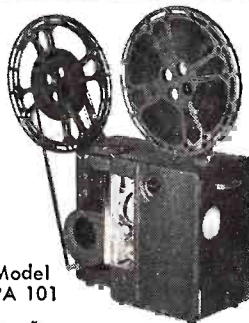
Complete TV Station Installations from Camera to Antenna



Model PA 605

Video Switcher

Full studio flexibility anywhere. Control can view, preview, fade, dissolve, etc. Views any of 5 inputs, 2 remotes, outgoing line. Twin fade levers.



Model PA 101

3-2 Projector

Portable sync unit. No need for special phasing facilities. Projects rear-screen or "direct in." Ideal for remote origination of film. Relieves load on Telecine.



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Highest quality 16-mm projector, designed specifically for TV. Delivers 100 foot-candles to tube. Sharp, steady pictures from 4000-foot film magazine.



Model PA 607

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Provides revolutionary remote control of camera focus, lens change. Styled to match other components in the GPL TV line.

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WIRE
OR PHONE
FOR DETAILS



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**made
finer!**



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o your most exacting requirements

⊙ Backed by fifty years (1903-1953) of fine-wire specialization! During all this time we have supplied bare and insulated wires to many of the most critical wire users.

Your specifications and requirements for *insulated wires* in the East are processed by our Winsted Division; in the West, the Cassopolis Division has been established to facilitate rapid shipments. Insulators and others requiring *bare wires* should contact the Ossining Division for prompt and efficient service.

Our research and development staff is always available to aid our customers in their requirements.

SPECIAL WIRES
(Ossining Division)

Silver-plated wires in coarse and fine sizes, for high-frequency conduction and high-temperature applications.
Electro-tinned, soft-annealed wire.
Other specialty wires to meet specifications.

BARE WIRES
(Ossining Division)

- Tin
- Cadmium
- Oxygen-free Copper
- Silver
- Fuse
- Silver-plated
- Specialties

TEXTILE-COVERED WIRES
(Winsted Division)

- Nylon
 - Cotton
 - Colonese
 - Rayon
 - silk
 - Fiberglass
- Available on bare or enamelled wire; single or double-coated.

INSULATED WIRES
(Winsted and Cassopolis Divisions)

MATERIALS	TYPES	COVERINGS
Copper	Instrument	Plain and Heavy
Aluminum	Tubing	Enamel
Iron	Lite	Formvar
Copper-clad	Multiplied	EZsol (Liquid Nylon)
Steel	and Twisted	Cement-coated Enamel

HUDSON WIRE COMPANY



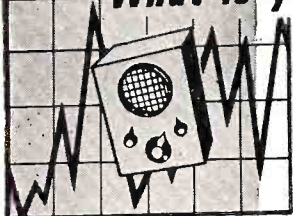
Bare Wires Insulated Wires

Winsted Division
Hudson Wire Company
Winsted, Conn.
Phone: Frontier 9-3341

Cassopolis Division
Hudson Wire Company
Cassopolis, Mich.
Phone: Cassopolis 56

Ossining Division
Hudson Wire Company
Ossining, N. Y.
Phone: Ossining 2-4710

What is your Delay or Regulating Problem?



For the most effective solution use the
SIMPLEST, MOST COMPACT
MOST ECONOMICAL
HERMETICALLY SEALED

AMPERITE

THERMOSTATIC DELAY RELAYS



STANDARD

Provide delays ranging from 2 to 120 seconds.

- Actuated by a heater, they operate on A.C., D.C., or Pulsating Current.
- Hermetically sealed. Not affected by altitude, moisture, or other climate changes.
- Circuits: SPST only—normally open or normally closed.

Amperite Thermostatic Delay Relays are compensated for ambient temperature changes from -55° to $+70^{\circ}$ C. Heaters consume approximately 2 W. and may be operated continuously. The units are most compact, rugged, explosion-proof, long-lived, and—very inexpensive!



MINIATURE

TYPES: Standard Radio Octal, and 9-Pin Miniature.

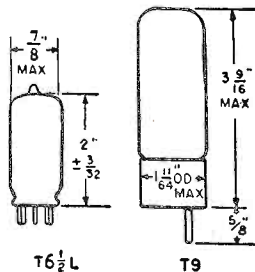
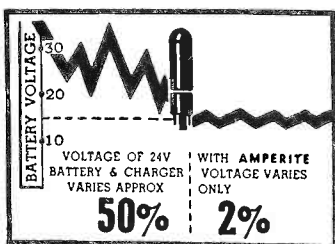
PROBLEM? Send for Bulletin No. TR-81

BALLAST-REGULATORS



T9 BULB

- Amperite Regulators are designed to keep the current in a circuit **automatically regulated** at a definite value (for example, 0.5 amp).
- For currents of 60 ma. to 5 amps. Operates on A.C., D.C., or Pulsating Current.
- Hermetically sealed, light, compact, and most inexpensive.



Maximum Wattage Dissipation: T6 1/2 L—5W. T9—10W.

Amperite Regulators are the simplest, most effective method for obtaining **automatic regulation** of current or voltage. **Hermetically sealed**, they are not affected by changes in altitude, ambient temperature (-55° to $+90^{\circ}$ C), or humidity. Rugged; no moving parts; changed as easily as a radio tube.

Write for 4-page Technical Bulletin No. AB-51

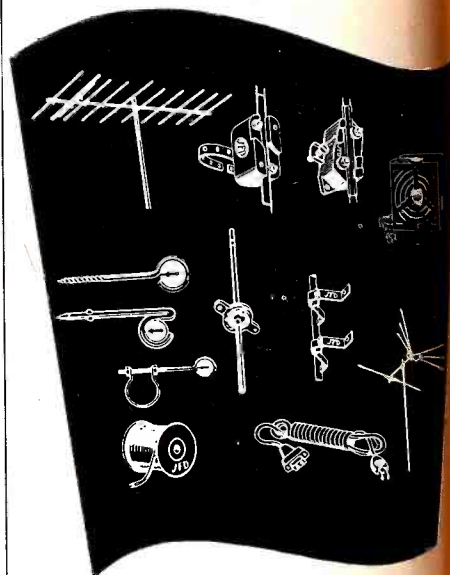
AMPERITE CO., Inc. 561 Broadway, New York 12, N. Y.

In Canada: Atlas Radio Corp., Ltd., 560 King St., W., Toronto 2B



27

years of
Engineering
Experience



JFD offers the World's largest selection of quality Radio and Television antennas, accessories, boosters and electronic components. Over 27 years of engineering experience and production skill are behind every JFD product—each a challenge to the field with outstanding design features!

Write today for complete JFD Radio and Television Catalogs.

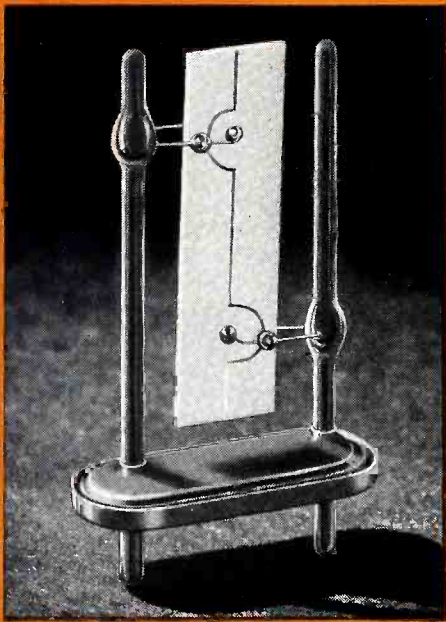


JFD Mfg. Co. Brooklyn 4, N.Y.
 Bensonhurst 6-9200

World's Largest Manufacturer of
 Television Antennas & Accessories

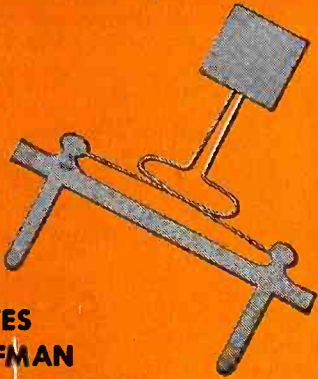
REEVES

HOFFMAN CORPORATION



**VOLUME MANUFACTURERS
OF LOW FREQUENCY CRYSTALS**

**as well as crystals
of standard frequency ranges**



**REEVES
HOFFMAN
CORPORATION**



LICENSED UNDER PATENTS OF THE BELL SYSTEM

**CHERRY AND NORTH STREETS
CARLISLE, PENNSYLVANIA**

**a subsidiary of
Claude Neon, Inc.**

NEY



PRECIOUS METAL ALLOYS

For ELECTRICAL and ELECTRONIC APPLICATION

CONTACTS

CONTACTS, brushes, wipers, slip rings, commutator segments and similar components for electrical instruments and apparatus represent a field in which Ney Research has a long list of important accomplishments. Ney precious metal alloys specially developed for these applications are widely and very successfully used. And now enlarged manufacturing facilities have been added to meet the steadily increasing demand.



SLIP RINGS AND COMMUTATOR BARS



NEY #90 Alloy, overcomes many of the disadvantages of coin silver when used in slip ring and commutator bar applications. Actually a modification of coin silver, NEY #90 is subjected to a carefully controlled processing

that produces a uniform hardness of 120-130 Brinell which has been found best for slip ring type applications. Since performance is also markedly influenced by surface condition, especially when brush pressure must be low, NEY #90 Alloy rings are given a specially developed finish that greatly reduces wear and electrical noise. NEY #90 Alloy is available in seamless tubing in all sizes up to 4" O. D., also in the form of plate, rod, wire and fabricated parts.

TEST RESULTS

Illustrations at right are typical test results of PALINEY* #7 . . . a Ney Precious Metal Alloy . . . being used for sliding contacts on nickel-chrome wire-wound potentiometers in comparison with phosphor bronze contacts. Figures show low initial error and maintained linearity of PALINEY* #7 performance. Condition of both contacts and windings after test indicate practically no wear.

Cathode Ray Oscillograph (Top Right) showing percentage error of standard potentiometer after one million cycles or two million sweeps of phosphor bronze contact over the wire. Initial linearity was $\pm .17\%$ and the error increased to $\pm 28\%$ plus noise.

(Bottom Right) Performance of standard potentiometer modified by substitution of PALINEY* #7 contact after one million cycles or two million sweeps over wire. The initial error was reduced to $\pm .12\%$ and this linearity was maintained throughout the test.

*Reg. T.M. of The J. M. NEY Co.

Write for your copy of Ney Data Book, "NEY PRECIOUS METALS FOR NON-CORROSIVE WEAR-RESISTANT PARTS." (Bulletin R-12) or Reprints of Technical Bulletins R-13, and R-14. Or call our Engineering Department outlining your needs.

The J. M. NEY COMPANY
179 ELM STREET • HARTFORD 1, CONNECTICUT

13NY52R

260

LOOKING FOR A

Perfect Mate?



PL259

SO239

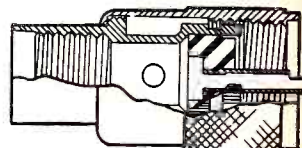
COAXIAL CONNECTOR CO. offers a fresh, economical and improved approach to the manufacture of the "Old Reliables." Practical know-how stands solidly behind every connector made by Coaxial.

It has been proved time and again that our J.A.N. precision-made connectors have been held aloft as a standard for the industry. Pride of workmanship coupled with a short manufacturing cycle insures the kind of product that you want when you want it.

Design problems? Engineering information? Special requirements? Engineering specialists will give you the benefit of Coaxial's know-how.

UHF SERIES CONNECTORS

For dependable low-cost, general purpose use. Satisfactory up to 200 megacycles and may be used with caution up to 500 megacycles.



AN Designation PL-259, PLUG (NT. 49190)

Non-weatherproof type. Mates with UHF female. Two-piece construction. For use with Cable RG-/U: 8, 9, 10, 11, 12, 13, 63, 65.

AN Designation PL-259A, PLUG (NT. 49195)

Similar to PL-259. It is a 3-piece unit for ease of handling. Non-weatherproof. Mates with UHF female. SO239.



AN Designation SO-239, NT. 49194 Receptacle

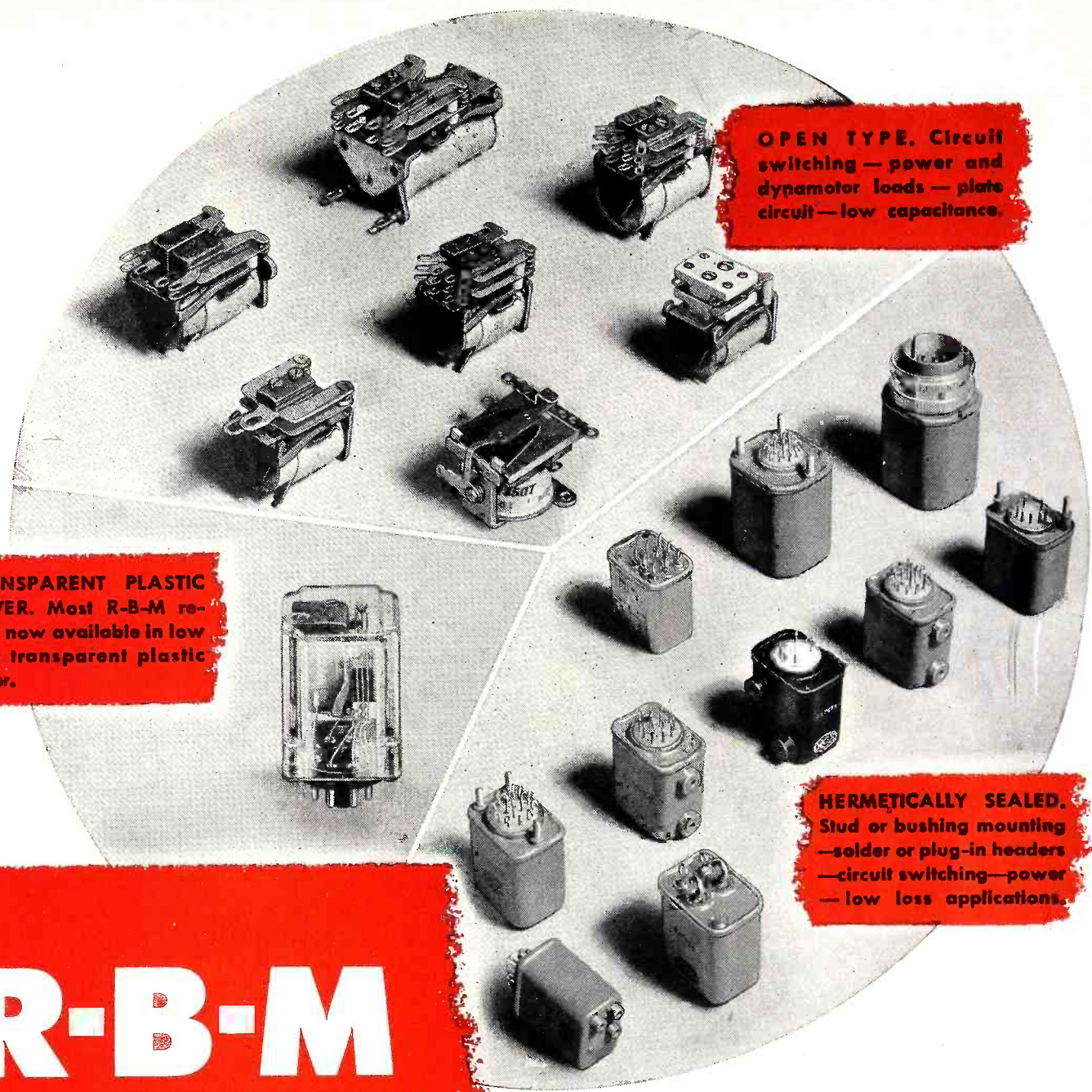
Mates with male plugs PL-259, PL-259A, UG-203/U. Non-weatherproof, single piece construction. For use with Cable RG-/U8, 9, 10, 11, 12, 13, 63, 65.

Also available special Adapter for the above Plugs (UG-175/U, UG-176/U) used with RG-58/U, RG-59/U, RG-62/U and other small cables.

FREE! Cross Reference Chart! Just ask for it or for more information.

COAXIAL CONNECTOR CO.

35 N. 2nd Ave., Mt. Vernon, N. Y. Mount Vernon 8-6410
CBWU-GOVERNMENT DESIGNATION



OPEN TYPE. Circuit switching — power and dynamotor loads — plate circuit — low capacitance.

TRANSPARENT PLASTIC COVER. Most R-B-M relays now available in low cost transparent plastic cover.

HERMETICALLY SEALED. Stud or bushing mounting — solder or plug-in headers — circuit switching — power — low loss applications.

R-B-M

•• Relays

FOR EVERY ELECTRONIC APPLICATION
Meeting Commercial and Government Requirements

OTHER PRODUCTS: Motor starting relays and overload protectors for refrigeration, appliance and general purpose motors. Industrial contractors and across-the-line

starters. NEMA size 1 and smaller. Low cost general purpose relays. Low voltage D.C. manual and magnetic devices.

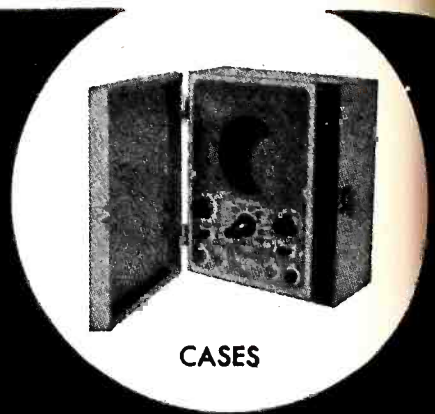
Let R-B-M engineering and production facilities serve you
 Contact us immediately — Phone 5121



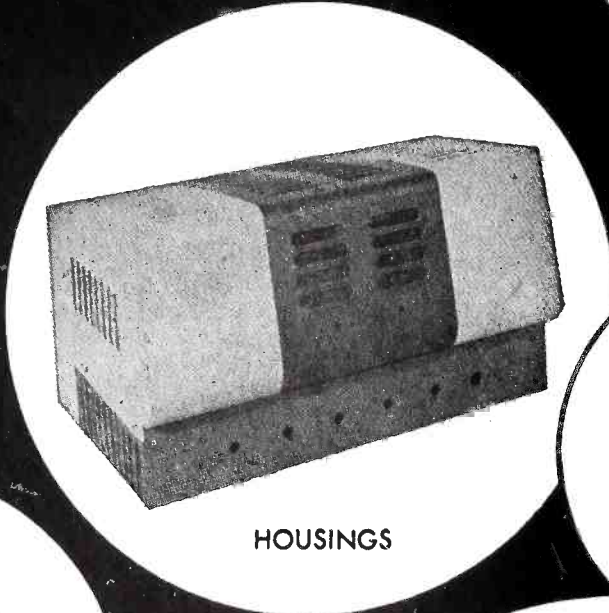
R-B-M DIVISION ESSEX WIRE CORP.
 Logansport, Indiana

AND MAGNETIC, ELECTRIC CONTROLS — FOR AUTOMOTIVE, INDUSTRIAL, COMMUNICATION AND ELECTRONIC USE

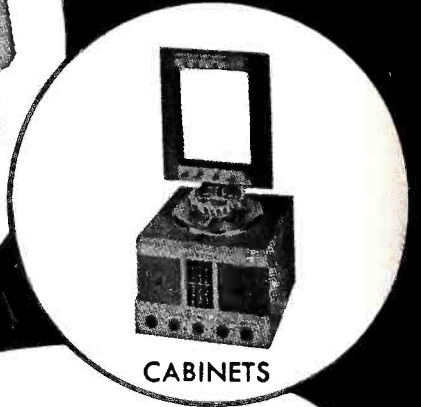
AT YOUR SERVICE WITH OUR TWO FACTORIES TO HELP YOU WITH YOUR SHEET METAL FABRICATION REQUIREMENTS.



CASES



HOUSINGS



CABINETS



CHASSIS



PANELS

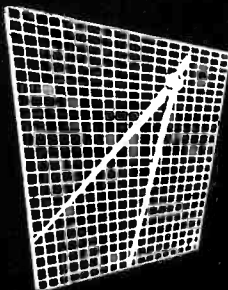
PRODUCING FOR THE FINEST!

- R. C. A.
- WESTERN ELECTRIC
- GENERAL ELECTRIC
- STROMBERG-CARLSON
- MOLDED INSULATION CO.
- ADMIRAL
- THOMAS EDISON INC.

Thousands of varied Production Dies and Tools available at no extra charge—to speed production and reduce your costs. We specialize in "Whistler Die Setups" for economic and speedy production.

Our modern Conveyorized Finishing Dept. includes—Pickling — Degreasing — Bonderizing and Baked Enamel Painting of all types; thus assuring you of a fine quality product.

We can assure you of excellent workmanship and prompt deliveries. Send us your blueprints and specifications. We shall quote you immediately.



S. WALTER Co., Inc.

PRECISION SHEET METAL PRODUCTS

1400 ATLANTIC AVENUE

BROOKLYN 16, N. Y.

HYacinth 3-9460

now available

the revolutionary
ELECTRO TEC
 process* for your
LARGE
SLIP RING
ASSEMBLIES



featuring

- LOWER COST • CLOSER TOLERANCES
- ONE-PIECE CONSTRUCTION • JEWEL-LIKE FINISH • UNIFORM RING HARDNESS
- REDUCED WEIGHT

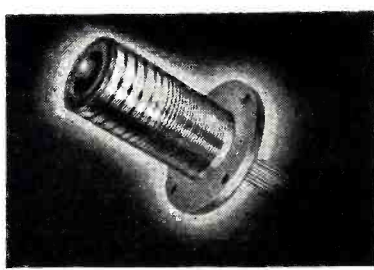


Now a Complete Service
 in all sizes of Slip Ring Assemblies

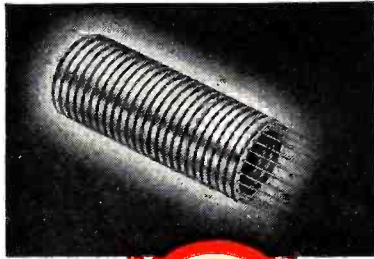
Assembly with 14
 hard silver
 deposited
 plastic
 retail locks
 place. Ma-
 ank insures
 diameter ap-
 thickness
 16".

Cylindrical assembly
 with 25 rings. Three
 wide rings accom-
 modate large contact area
 brushes for high current
 capacity. Length 14",
 O.D. approx. 5 3/8".

Assembly with 30
 various widths
 accommodate various
 requirements.
 approx. 4-5/16"
 designed for
 mounting.



type assem-
 3 3/4" long
 hard silver
 O.D. with
 less than



TENTS
 ENDING

Engineering Department
 available for consultation
 on any of your slip ring
 systems without obligation.



ELECTRO TEC CORPORATION
 SOUTH HACKENSACK • NEW JERSEY

ELECTRO TEC is now tooled up, with new expanded facilities for production of large Slip Ring Assemblies to exact customer specification. Sizes range up to 24" in diameter, either cylindrical or disc type.

The exclusive ELECTRO TEC PROCESS*—the electro-deposition of hard silver rings into an accurately machined plastic blank—consistently yields a high degree of dimensional accuracy, excellent concentricity, and a jewel-like ring finish. This process also eliminates expensive tooling and mold charges, frequently lowers costs to 30% of other methods of manufacture. The silver rings are uniformly hard for long life—75-90 Brinell.

ELECTRO TEC one-piece construction precludes dimensional variation due to accumulated errors. The plastic base is fully cured before rings are plated into it, thus preventing separation of base material from the rings.

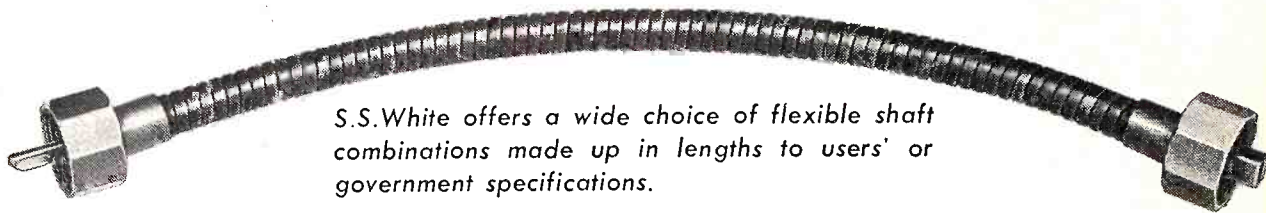
ELECTRO TEC LARGE SLIP RING Assemblies are widely used in Radar Equipment, Fire Control Systems, Test Tables and many other critical applications. Light weight combined with rugged durability recommends their use in airborne applications.

Every user knows the ELECTRO TEC reputation for quality and superiority in miniature and sub-miniature slip ring assemblies.

S.S. WHITE PRODUCTS

for ELECTRONIC and RADIO EQUIPMENT

FLEXIBLE SHAFTS



S.S. White offers a wide choice of flexible shaft combinations made up in lengths to users' or government specifications.

FOR POWER DRIVES

Available in a comprehensive selection of sizes, load capacities, and other characteristics to meet a wide range of power drive requirements.

FOR REMOTE CONTROL

For either manual or mechanical control. Featured by minimum backlash (i.e., low deflection in either direction of rotation), and easy, jump-free operation.

THE FLEXIBLE SHAFT HANDBOOK — 3rd Edition has 260 pages of facts and data on flexible shaft selection and application. A copy will be sent free to any engineer who writes for it on his business letterhead.

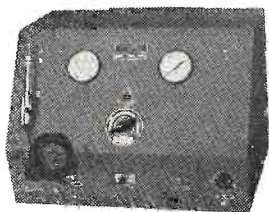


FLEXIBLE SHAFT ADAPTERS

Used to connect flexible shafts in close quarters or where space conditions prevent a direct connection without bending the shaft to the point of possible damage. Drawings and specifications on request.

INDUSTRIAL "AIRBRASIVE" CUTTING UNITS

For laboratory and production work



Utilizes a fine jet of gas-propelled abrasive particles to perform a wide variety of high precision operations including cutting, etching, deburring and controlled removal of surface coatings.

Applications include: cutting spiral bands on deposited carbon resistors; "trimming" conductive material on printed circuits; cutting germanium; drilling fine holes in glass and tubing.

Samples of your product or material will be tested to determine the suitability of the "Airbrasive" Unit for your requirements. No obligation. Write for Bulletin 5212.

PLASTIC PLUGS AND CAPS

THREADED TYPE. Provide inexpensive protection to threaded openings and studs during shipment, storage or maintenance operations. Made of tough, non-brittle plastic, they will not chip or break easily and can be used over and over again. In N.P.T. Standard, Machine Screw and Metric Threads. Write for Bulletin P-5203.



ELASTOPLASTIC TYPE. Slipped into or over the ends of plain tubing, elastoplastic plugs and caps seal out dirt and moisture and prevent damage. They hold by friction fit and are easy to apply and remove. Write for Bulletin P-5107.



MOLDED RESISTORS

These "all-weather" resistors have inherent low noise level and good stability in all climates.

HIGH VALUE RANGE—10 to 10,000,000 megohms for scientific and industrial control, measuring and laboratory equipment, as well as many high voltage applications.

STANDARD RANGE—1,000 ohms to 9 megohms. For commercial radio, telephone, telegraph, television, etc. Also used in a variety of USN equipment.

Also available are S.S. White 80X High Voltage resistors rated at 4 watts in a range of resistance values from 100 to 100,000 megohms. Write for Bulletin 4906.

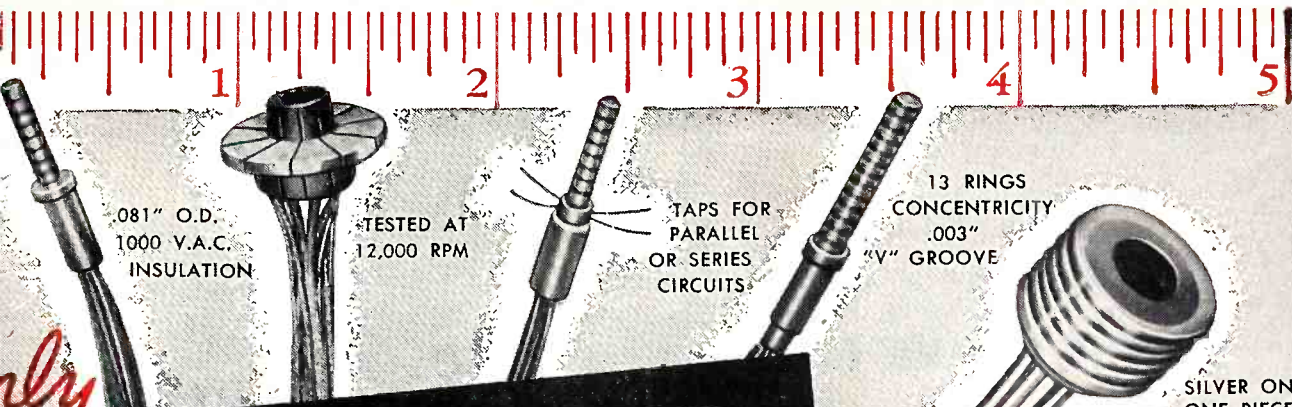


THE S.S. White INDUSTRIAL DIVISION
DENTAL MFG. CO.



Dept. EG, 10 East 40th Street
NEW YORK 16, N. Y.

WESTERN DISTRICT OFFICE: TIMES BUILDING, LONG BEACH, CALIFORNIA



ELECTRO TEC

PRECISION-MINIATURE

slip ring assemblies AND COMMUTATORS

offer all these advantages:

EXCLUSIVE* ELECTRO TEC TECHNIQUES

insure closer tolerances, absolute uniformity, and the ultimate in miniaturization

Electro Tec units are the product of an exclusive manufacturing technique that results in accuracy unattainable by conventional machining methods. In this process a plastic is moulded around wire leads. Accurate machining reduces this blank to the proper shape, complete with grooves. Hard silver is deposited into grooves by electroplating to produce the required rings. Final machining insures concentricity and dimensional accuracy. The result is one-piece, unitized construction with conducting rings of 90 Brinell hardness.

Diameters of these assemblies range from .045" to 24" cylindrical diameter. Cross-sections may range from .005" to .060" or more. Rings are polished to a jewel-like finish and can be held to 4 mils or better. Even the smallest sizes withstand a 1000 V.A.C. breakdown test. Most types easily withstand rotational speeds up to 12000 rpm.

ELECTRO TEC Assemblies are Specified by the Nation's Leading Precision Instrument and Equipment Manufacturers for Proven Greater Dependability, Longer Life, Smoother Functioning.

The uniformly superior performance of Electro Tec slip ring and commutator assemblies in thousands of industrial and governmental applications has resulted in wide adoption of these components by most leading manufacturers of precision instruments and equipment. Although these products provide improved performance and extra dependability, prices are strictly competitive. Write today for fully illustrated literature.

ELECTRO TEC CORPORATION
 SO. HACKENSACK NEW JERSEY

PRODUCTS OF PRECISION CRAFTSMANSHIP BY A NEW AND REVOLUTIONARY PROCESS

- ONE PIECE, UNITIZED CONSTRUCTION
- ABSOLUTE MINIMUM TORQUE FRICTION
- DIAMETERS FROM .045" TO 24.0"
- MINIMUM 1000 V.A.C. HI-POT INTER-CIRCUIT
- UNIFORMLY HARD SILVER RINGS PLATED INTO GROOVES ON PRECISION MACHINED ONE PIECE PLASTIC FORM
- SPECIAL SURFACE DEPOSITS PREVENT TARNISH, MINIMIZE FRICTION, BRUSH NOISE AND PRACTICALLY ELIMINATE WEAR

ACTUAL SIZE

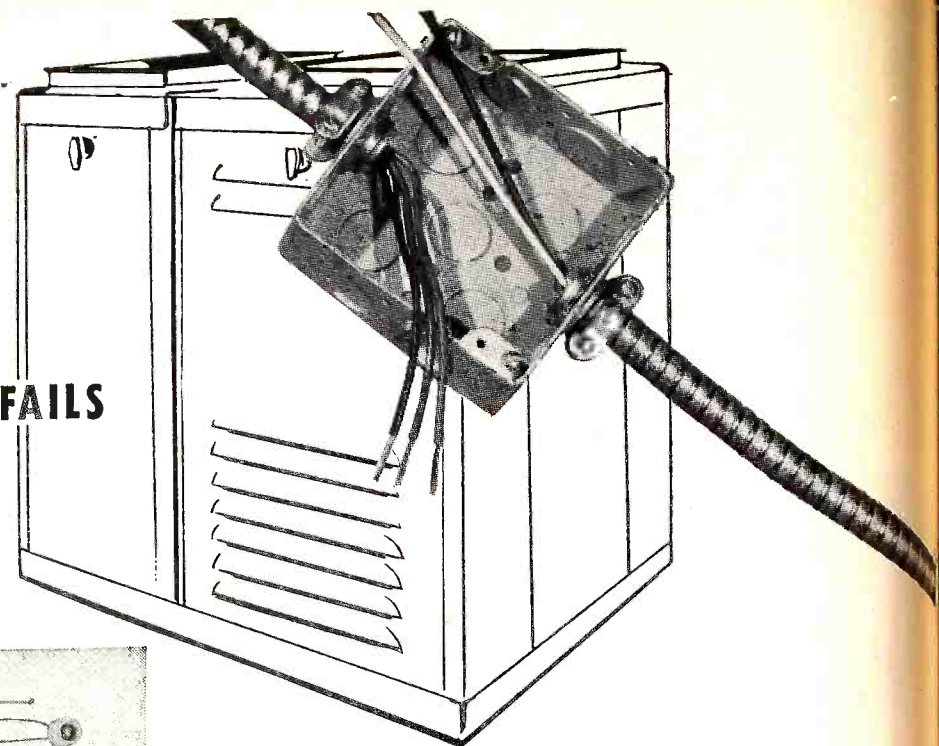
ULTRA-MINIATURIZED SLIP RING ASSEMBLY

6 Insulated Contact Rings
 Ring Width .030"
 Barrier Width .015"
 Ring Diameter .045"
 Weight 5.5 Grains (1/80 Ounce)

Rings: 60-70 Brinell Fine Silver
 Tarnish Resistant, Friction Minimizing
 Surface Deposits
 1000 Volt Hi-Pot Between Rings
 Color Coded Leads

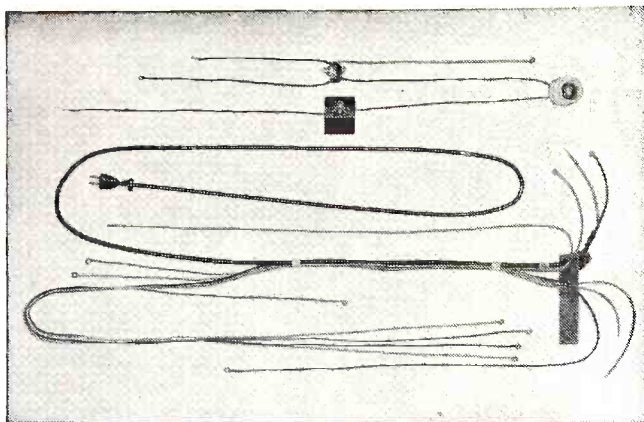
*PATENTS PENDING

IF THE WIRING FAILS

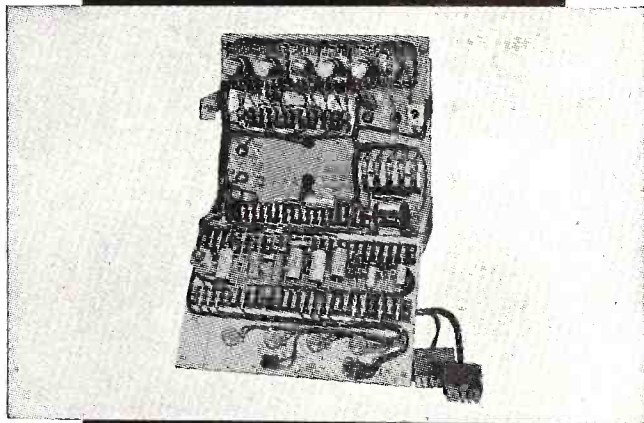


**SO DOES YOUR
PRODUCT'S REPUTATION**

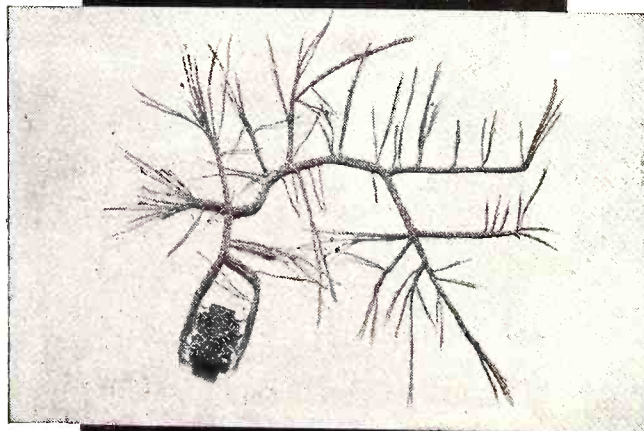
FOR DEPENDABLE PRODUCT WIRING USE



Home Appliances. Unilectric serves over 80 leading appliance manufacturers like Hamilton Mfg. Co. of Two Rivers, Wisconsin.



Electronic Products. Unilectric Wiring Systems are standard on many electronic products like this Square D Co. electronic welder.



Military Products. Unilectric's war and defense production experience includes products like this radar cable assembly for Wells Gardner Co., Chicago.

UNILECTRIC
TRADE-MARK

WIRING SYSTEMS

For over 10 years, Unilectric has been wiring headquarters for the nation's electrical and electronic manufacturers.

**Investigate This Proven
Cost Saving Service!**

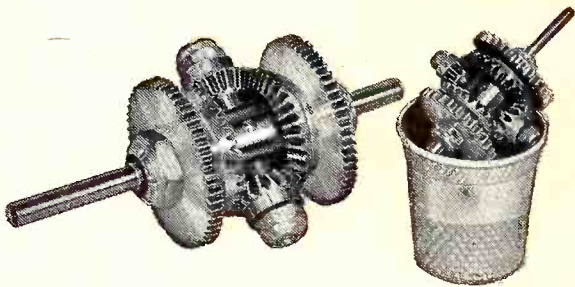
UNILECTRIC WIRING SYSTEMS
TRADE-MARK

MANUFACTURED BY
UNITED MANUFACTURING & SERVICE CO.
409 SOUTH SIXTH STREET
MILWAUKEE 4, WISCONSIN

Belock Precision Miniatures

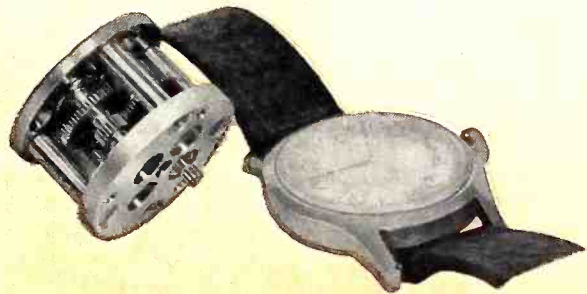
engineered for laboratory and commercial instrumentation

Precision in smaller packages is the requirement of today's Servo design. To meet this requirement, we are proud to introduce these completely new designs to our list of standard precision components.



Precision miniature differentials are designed for applications where space is at a premium without a sacrifice in accuracy. Low break-away torque, adjustment for wear and dual planetary gears for high torque capacity are combined in this design to give maximum performance in a minimum of space.

Integral Servo motor gear heads are designed and built for high accuracy Servo performance. Ball bearings, stainless steel construction and precision gearing incorporate into the gearheads the advantage of low backlash, long life and high torque capacity. Your inquiries are invited.



... from the BICO standard line of Electro-Mechanical Servo Components ...

SPECIALISTS in DESIGN, DEVELOPMENT and MANUFACTURE of
computers

gyroscopes

bombsights

radar antennas

power drives



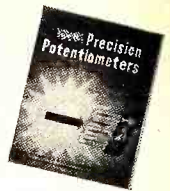
Belock Instrument Corporation

COLLEGE POINT

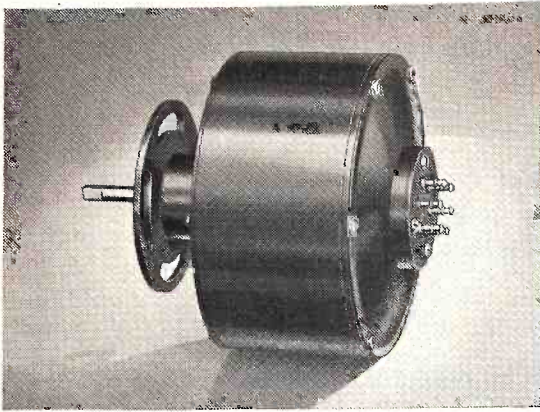
NEW YORK

PRECISION POTENTIOMETERS

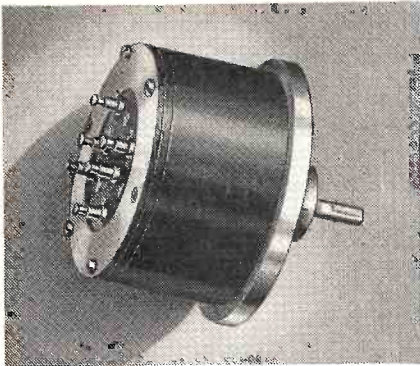
Sinusoidal Type CONDENSED SPECIFICATIONS



Write for Booklet



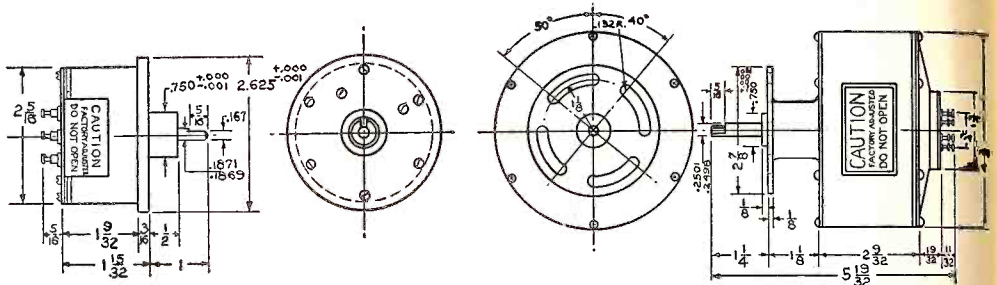
RL-14 MS



RL-11C

Total resistance	16,000 $\pm 10\%$	35,400 $\pm 1\%$
Percent resistance within brush circle	Approx. 85%	99 $\pm 1/4\%$
Angle of rotation	360°	360°
Weight	4.75 oz.	1.8 lbs.
Torque (Approximate)	3/4 oz. in.	2 oz. in.
Wire	80 Ni 20 Cr	80 Ni 20 Cr
Resolution	.4°	.2°
Angular accuracy	$\pm .6^\circ$	$\pm .5^\circ$
Amplitude accuracy	$\pm .8\%$	$\pm .6\%$
Maximum volts across winding	150	350
Maximum speed	60 rpm	60 rpm
Expected Life	350,000 cycles	200,000 cycles

Minor variations of these standard designs, available on special order, permit operation at high rotational speeds with some loss of accuracy.

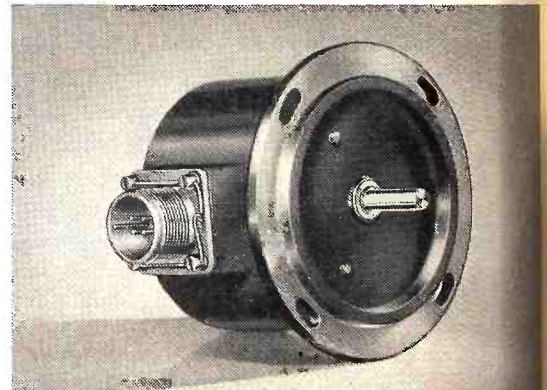
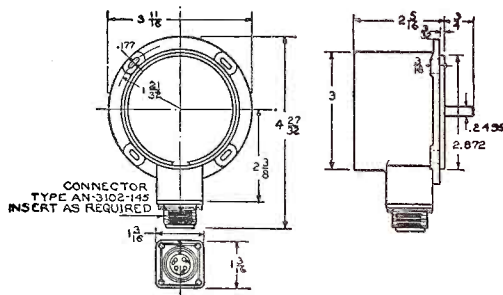


RL-11C

RL-14 MS

Toroidal Type

- Rating 15 watts
- Torque, max. 2 oz. inches
- Weight 14 oz.
- Resistance 500 to 25,000 ohms
- Useful angle 360° or less
- Resolution 0.06 to 0.2%
- Linearity... $\pm 1\%$ with multiple taps;
 $\pm 1/2\%$ end taps only
- Brushes 2 (180° $\pm 1/2$)
- External connections. 6 (4 winding taps
—2 brushes or 5 winding taps—1 brush)

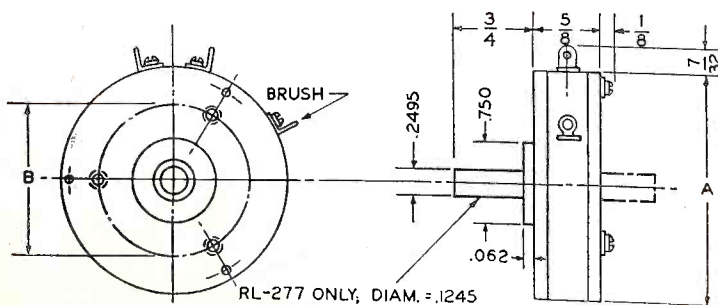


RL-270 Type

CONDENSED SPECIFICATIONS

	RL-272	RL-270	RL-271	RL-275	RL-277
Diameter "A" (in.)	5	3	2	1 5/8	1 1/4
Rating (watts)	12	6	3	2	1.5
Torque, max. (oz. in.)	1	1	1	1/2	1/2
Weight (oz.)	15	6	3	2	1
Mounting: 3 holes 1/8" deep	#8-32	#8-32	#8-32	#6-32	#4-40
Mounting circle diam. "B" (in.)	3.250	1.750	1.250	1.000	1.000
Max. resistance (ohms) $\pm 10\%$	500,000	275,000	160,000	105,000	64,000
Min. resistance (ohms) $\pm 10\%$	460	250	150	105	80
Max. useful angle (deg.)	358 $\pm 1/2$	356 $\pm 1/2$	354 $\pm 1/2$	352 $\pm 1/2$	350 $\pm 1/2$
Max. resolution (%)	0.05	0.08	0.15	0.2	0.25
Min. resolution (%)	0.01	0.015	0.025	0.04	0.05
Linearity (%)	± 0.10	± 0.10	± 0.15	± 0.25	± 0.30

Standard Shaft: single end, 3/4" extension; specify if otherwise.
Double-ended shaft special; specify diameter and length.
Multiple sections can be ganged; add 3/8" to the overall length for each additional section.
Terminals will be positioned on the circumference as required for taps and winding angle.
Expected life of all types over 1,000,000 cycles.



RL-277 ONLY, DIAM. = .1245

THE GAMEWELL COMPANY
Newton Upper Falls 64, Massachusetts



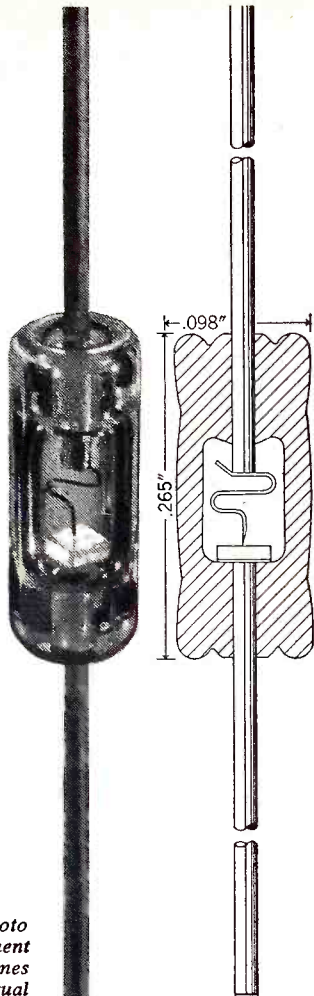


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Diodes
are

**FUSION
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IN
GLASS**

for electrical
stability

GLASS-TO-METAL fusion sealing for electrical stability is an exclusive feature of **HUGHES GERMANIUM DIODES**. The final seal in precision assembly operations is made at a temperature exceeding 700° C.

Proved in billions of vacuum tubes, the glass-to-metal seal has been incorporated to full advantage in diode manufacture for the first time by the Hughes-developed process of fusion sealing. The result is a unique germanium diode whose elements are encased in a rigid *one-piece* glass envelope, which assures permanent freedom from moisture penetration.

THE **HUGHES GERMANIUM DIODE** employs no wax or solder, and has no mechanical joints or pressed-in parts to shift position.

Each **HUGHES DIODE** is humidity-cycled.
Each **HUGHES DIODE** is temperature-cycled.
Each **HUGHES DIODE** is JAN shock-tested.

Recently announced new High-Conductance diodes, created by Hughes Research and Development Laboratories, set new standards of diode conductance. Characteristics of these high-conductance diode types, indicated in red, are shown in the table below.

HUGHES GERMANIUM DIODES have proved consistently able to meet exacting requirements in airborne electronic equipment for navigation, fire control and guided missiles.

Volume orders for most types of **HUGHES DIODES** can be filled from stock. Diodes are also tested to special specifications, including high-temperature electrical requirements.

HUGHES GERMANIUM DIODE ELECTRICAL SPECIFICATIONS AT 25° C.

Description	RTMA Type	Test Peak Inverse Voltage (volts)	Maximum Inverse Working Voltage (volts)	Minimum Forward Current @ +1 v (ma)	Maximum Inverse Current (ma)
High Peak	1N55B	190	150	5.0	0.500 @ -150 v
	1N68A	130	100	3.0	0.625 @ -100 v
High Back Resistance	1N67A	100	80	4.0	0.005 @ -5 v; 0.050 @ -50 v
	1N99	100	80	10.0	0.005 @ -5 v; 0.100 @ -50 v
	1N100	100	80	20.0	0.005 @ -5 v; 0.050 @ -50 v
High Back Resistance	1N89	100	80	3.5	0.008 @ -5 v; 0.100 @ -50 v
	1N97	100	80	10.0	0.008 @ -5 v; 0.100 @ -50 v
	1N98	100	80	20.0	0.008 @ -5 v; 0.100 @ -50 v
High Back Resistance	1N116	75	60	5.0	0.100 @ -50 v
	1N117	75	60	10.0	0.100 @ -50 v
	1N118	75	60	20.0	0.100 @ -50 v
General Purpose	1N90	75	60	5.0	0.800 @ -50 v
	1N95	75	60	10.0	0.800 @ -50 v
	1N96	75	60	20.0	0.800 @ -50 v
JAN Types	1N126**	75	60	5.0	0.050 @ -10 v; 0.850 @ -50 v
	1N127†	125	100	3.0	0.025 @ -10 v; 0.300 @ -50 v
	1N128‡	50	40	3.0	0.010 @ -10 v

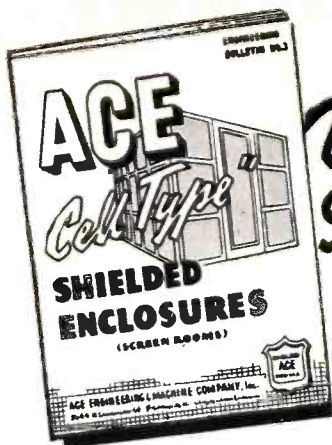
*That voltage at which dynamic resistance is zero under specified conditions. Each Hughes Diode is subjected to a voltage rising linearly at 90 volts per second.
 **Formerly 1N69A. †Formerly 1N70A. ‡Formerly 1N81A. New types in red.

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Write for this
SCREEN ROOM GUIDE!

Ask for
ACE Bulletin 3



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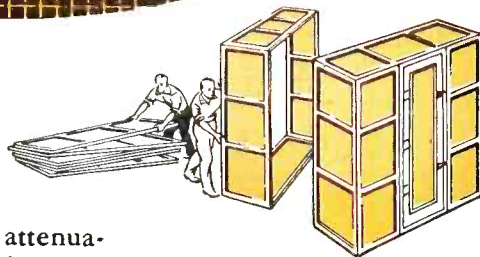
RADIO INTERFERENCE

"IN" OR "OUT"

Nine out of 10 screen rooms used in meeting today's exacting specifications were made by ACE!

These sturdy shielded enclosures provide a **GUARANTEED** attenuation of 100 db from 0.15 to 1,000 megacycles and to closely approach this attenuation at 10,000 mc. They are ideally suited for keeping "background" radio interference influence from affecting sensitive R-F measurements or for shielding equipment that would otherwise cause serious radio broadcast or TV noise.

Features include low R-F impedance door design; complete facilities for power, water, gas, air conditioning or ventilation service entries; access doors; "cell type", single screen or solid shield and many others.



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Ace rooms are supplied in pre-built sectional form for quick, easy erection. They can readily be enlarged or relocated.



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MIL-1-6181 AND OTHERS WITH AN
ACE SHIELDED ENCLOSURE!**

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Ready reference throughout the year... this Mid-June issue of electronics serves the industry in the exacting manner that it requires.

The **electronics BUYERS' GUIDE**

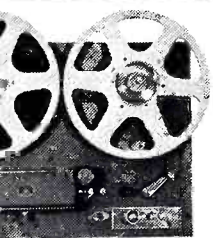
provides users with the only accurate and reliable product source available in the electronic industry...

They refer FIRST to the "GUIDE."

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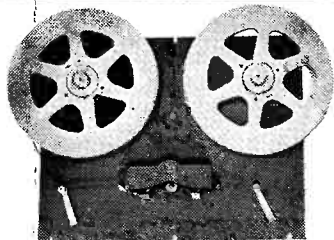
of the world's finest recording equipment

T A P E E Q U I P M E N T



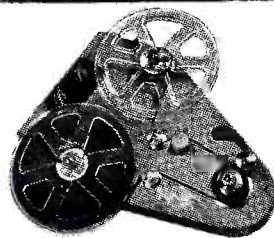
**BEST PRESTO TAPE
RECORDER RC-11**

"Unitized" construction with capstan drive unit. Reel sizes 6 and 8 inches; three enclosed heads; automatic operation; heavy ribbed aluminum housing. PRESTO's most advanced tape mechanism.



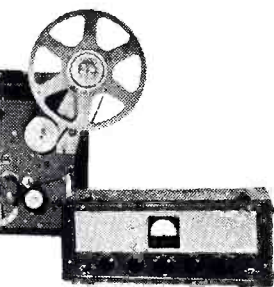
**LONG-PLAYING TAPE
REPRODUCER PB-17**

Designed especially for background music in industrial plants, entertainment locations, ships and trains. Eight hour tape cycle at 3 3/4" / sec.; dual track; 4800 ft. reel capacity; frequency resp. is 50 to 8,000 cps. (± 2 db)



**TURNTABLE-DRIVEN TAPE
REPRODUCER TL-10**

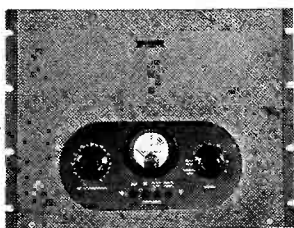
Most amazing development to hit the recording field in years. Makes any standard 16" turntable quickly adaptable to tape. Turntable acts as motor; speeds of 7 1/2" / sec. and 15" / sec. Plugs into standard studio speech input equipment; no preamplifier required.



PORTABLE PT-920

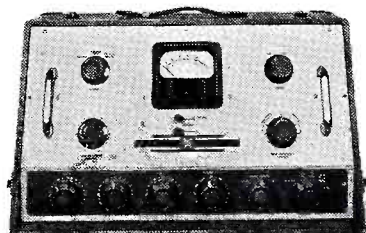
Portable tape machine is shown with new RA-1 reel adapters which allow reel size to 10 1/2 inches. Three heads without friction clutch or friction. Frequency response 20 to 17,000 cps. frequency response dynamic range.

R E C O R D I N G A M P L I F I E R S



PRESTO 92-B

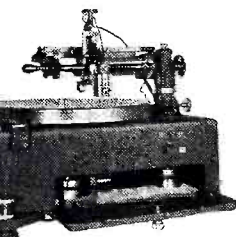
PRESTO's famous 60 watt recording amplifier for rack mounting. Removable front panel makes maintenance easy. Selector switch and one meter indicate output level and tube plate currents. Push-button selector for recording characteristics. Response: 20 to 17,000 cps.



PRESTO PORTABLE 90-B

Qualities of high fidelity studio console but portable, with complete facilities for remote operation. Distortion of less than 1.5% at maximum output. Equalizers for flat, NAB 33 1/3 rpm, phono, NAB playback and automatic. Three-microphone input with mixer and master gain control.

D I S C E Q U I P M E N T



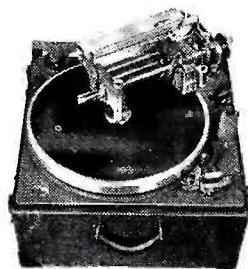
AUDIO CONSOLE 8 D-G

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**PRESTO TRANSCRIPTION TURNTABLE
10-B**

Here is an improved model of the famous PRESTO 10-A which has been the preferred turntable in hundreds of broadcast stations. The 10-B is a rim-driven table of exceptional accuracy with 3-speed mechanism. Offered as chassis only or in console cabinet.



PRESTO PORTABLE RECORDER 6-N

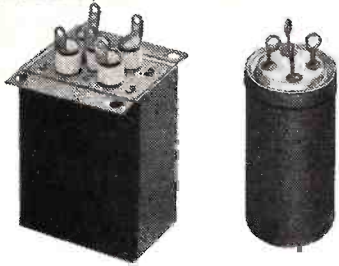
World favorite! Unusual reliability under all recording conditions. Low mechanical noise level. Speed accuracy excellent at 78 and 33 1/3 rpm. Equipped with 1-D cutting head. Microgroove attachment available at extra cost.



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Division: 25 Warren Street, New York 7, N. Y. • Canadian Division: Walter P. Downs, Ltd., Dominion Square Bldg., Montreal

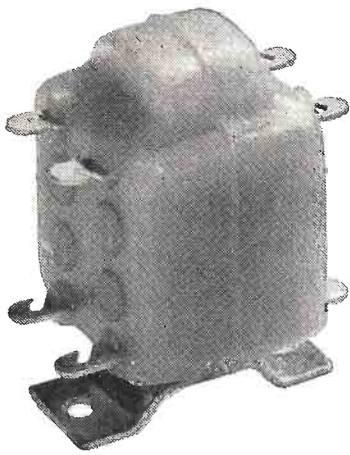
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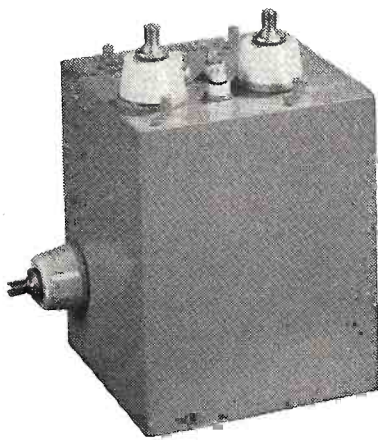


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A LINE

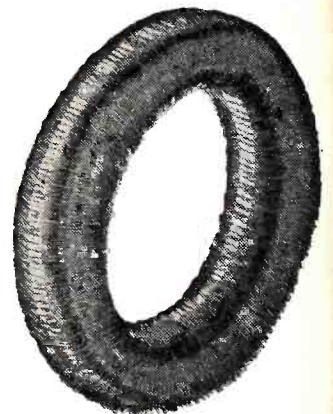
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OIL-FILLED



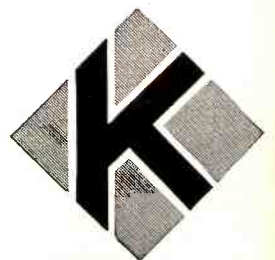
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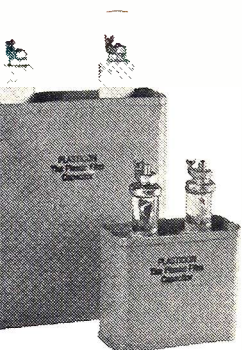
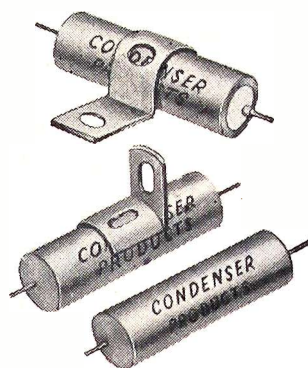


PLASTICON GLASSMIKE CAPACITORS

glass housing, plastic dielectric, temperatures to 125°C. Resistance 10,000 megohms min. ASG type for DC applications; LSG for RF use; PAG where stability and temperature co-efficient is required. TAG and MAG for over 125° C.

PLASTICON TYPE "M" miniature CAPACITORS

with new Mylar Film*. Resistance 125,000 megohms minimum. Temperatures to 140° C., small size—light weight. Voltage ranges from 100 to 600 V DC. Available with either or both ends insulated and with any selection of brackets.

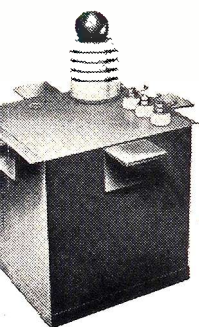
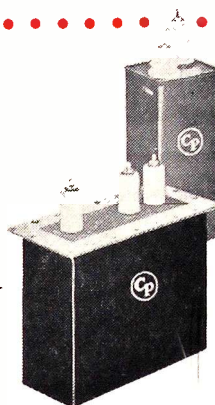


PLASTICON DC RECTANGULAR CAPACITORS

(CP70 style), voltage ranges from 600 V DC to 100 KV DC or higher. Designed for audio filter, coupling and by-pass service in electronic, control, and other similar equipment. Temperature characteristics to suit individual application.

PULSE FORMING NETWORKS and CAPACITORS

utilizing plastic films for higher volt per mil loading and lower losses in capacitor dielectric. Smaller size and weight, longer life. Stable performance at high temperatures. Ranges of voltage up to 60 KV.

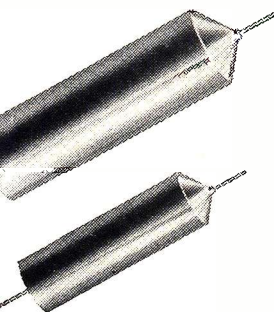
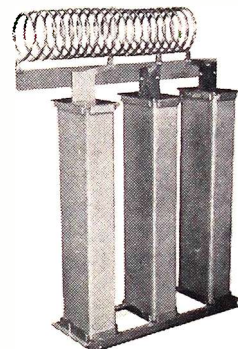


PLASTICON HI-VOLT POWER SUPPLIES

in the following ranges: 2,000 V, 5,000 V, 12,000 V, 15,000 V, 30,000 V, and 50,000 V, at frequencies at 60 cycles and 400 to 1,000 cycles. Small size, light weight, engineered for various applications.

SPECIALLY DESIGNED CAPACITORS

for unusual applications where plastic film dielectric is essential. Examples: ultra high resistance (1014) capacitors for radiation counters (Nuclear), and RF power capacitors for transmitters, dielectric and induction heaters.

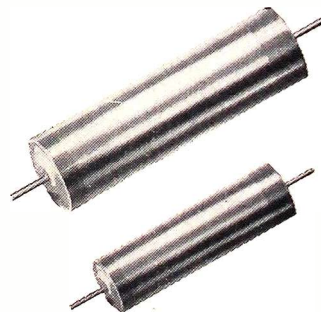


ALL-PLASTIC PLASTIMIKE CAPACITORS

The first all plastic tubular capacitor for use in Radio and TV sets. All-plastic case. Mylar* dielectric good to 125°. Epoxy resin seal. 400, 600, and 1,500 V DC ranges. Competitively priced with previous types of plastic tubulars.

PLASTICON GLASSMIKE Jr. CAPACITORS

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for catalog and chart of characteristics.

* DuPont trade name

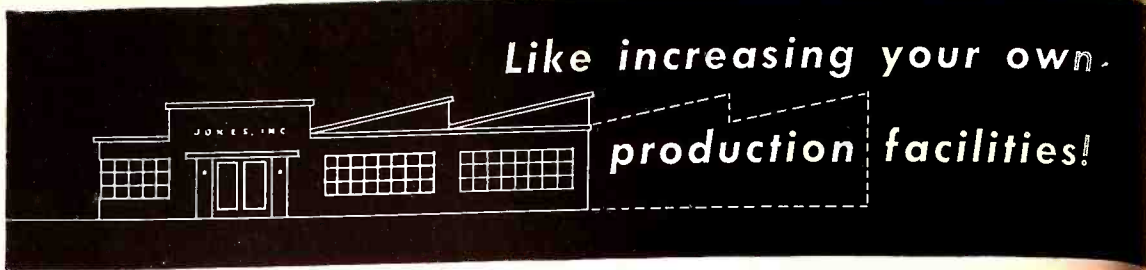
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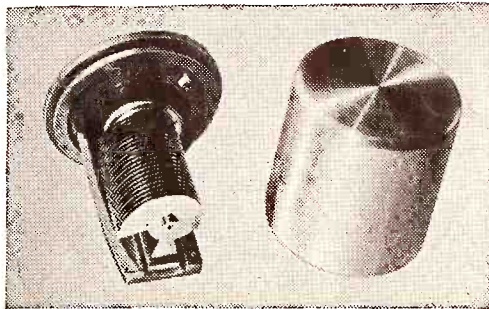
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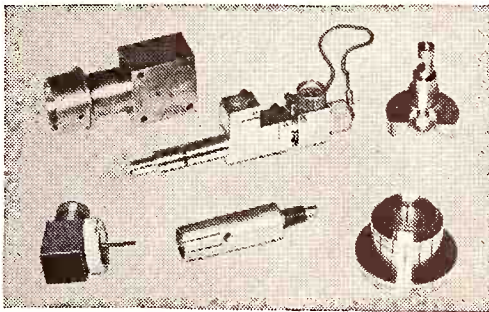
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Specialists in Microwave Components

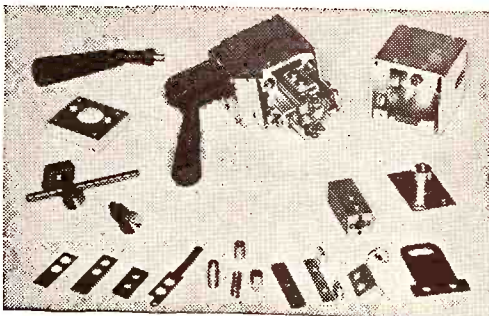
Our varied experience in the manufacture of precision electronic parts, as well as machine parts, used in the communication and aircraft industries, includes fabrication of beryllium copper, molybdenum, tantalum, Palladium, Monel, plexiglass, polystyrene and many other materials. Some of the microwave components we have produced are: radar filters, crystal converters, cavity tuners, connectors and adapters, tees and directional couplers and precision waveguides. Other examples of precision work include magnetic tuners, crystal-heater ovens and cathode-ray tube parts.

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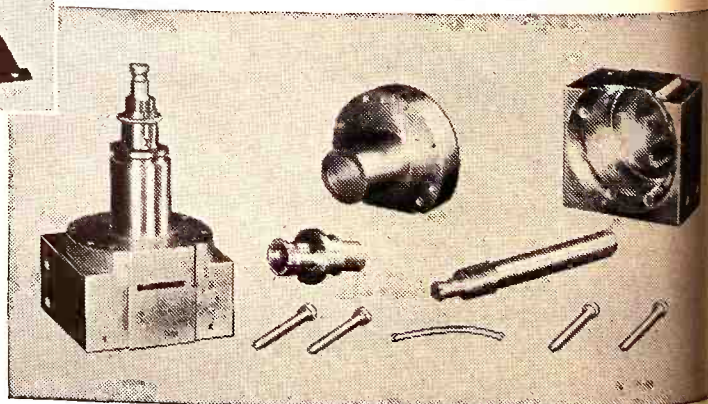
● **CONNECTOR AND ADAPTER ASSEMBLIES,** including crystal converters and waveguide connectors. Materials are beryllium copper and phosphor bronze. Examples of precision screw machine, milling and boring operations. Tolerances as close as two ten-thousandths of an inch.



● **FOUR WAY TRACKING SWITCH.** With its component parts, this assembly shows examples of stamping, milling and screw machine work. Accurate alignment of crossbar contact points and free function of plunger and handle sub-assemblies are "musts".



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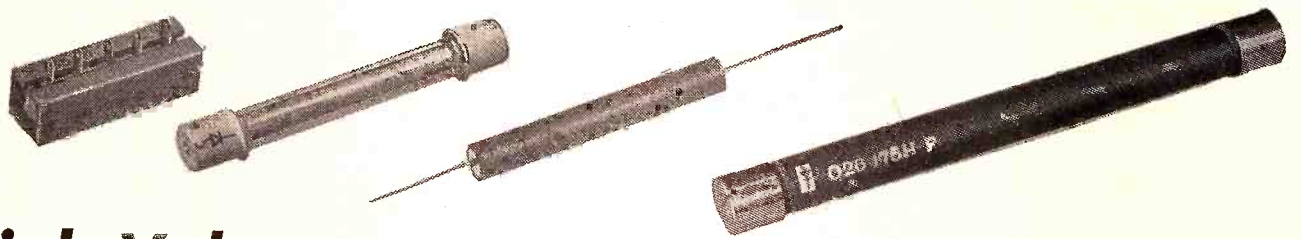
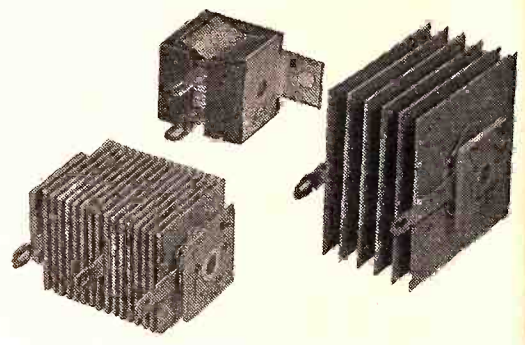


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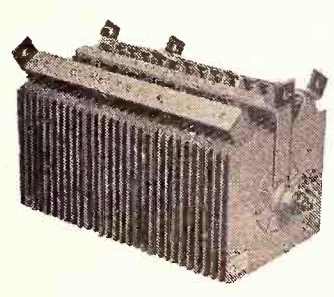
Sarkes Tarzian® "Centre Kooled"

SELENIUM RECTIFIERS

Radio Type Designed primarily for use in radio and television receivers these low cost rectifiers have also found wide application in electronic equipments. Rated at 130 volts AC input, standard types with current ratings from 10 to 450 milliamperes are available for prompt delivery from stock.



High Voltage Sarkes Tarzian High Voltage Rectifiers are available in two current ratings. In half wave circuits the type 1 cell is rated at 25 milliamperes DC and the type O cell at 5 milliamperes. Maximum voltage rating available in a single half wave stack is approximately 12,000 volts peak inverse. Sarkes Tarzian high voltage rectifiers have found wide application in military equipments as well as photo-flash power supplies. Type O and 1 rectifiers are also available in full wave bridge and center tap connections.



Power Type Fourteen cell sizes ranging in size from 1/4" diameter to 4 1/4" x 12" are available in Sarkes Tarzian Power Rectifiers. This large selection promises an extreme flexibility in design therefore economical, compact, designs are available for any practical voltage or current range of requirements. Sarkes Tarzian engineers will recommend the design for your application.



Embedments
A recent "first" in the industry, Sarkes Tarzian embedments offer the advantages of hermetically sealed rectifiers at a fraction of the size, weight and cost.

Diodes
Currently available in two sizes, (1/8" and 5/16" housing) Sarkes Tarzian diodes are designed for use as limiters, voltage, low current relay voltage and many other very current applications.

Please write, wire or phone for complete information on all types of Sarkes Tarzian Selenium Rectifiers.



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RECTIFIER DIVISION

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SLIP RINGS

*brush holders • commutators
specialties*

specify

ICI

4-6 Micro finish

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by every test



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VULCAN

ELECTRIC SOLDERING TOOLS



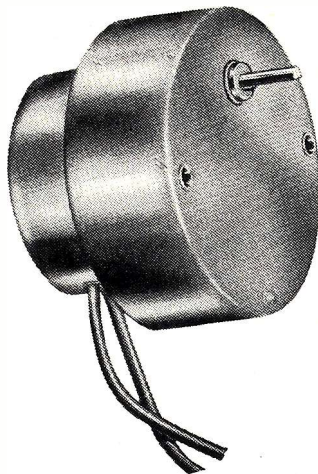
ELECTRIC HEATING ELEMENTS



VULCAN
ELECTRIC COMPANY
DANVERS 101 MASS.

BRISTOL SYNCHRONOUS MOTORS

2 Inches in Diameter

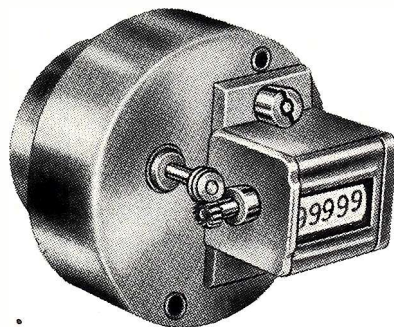


BRISTOL "CIRCLE B" SYNCHRONOUS TIMING MOTORS

Provide exceptional power. Range up to 16 in. oz. torque continuous duty and 84 in. oz. torque intermittent duty at 1 r.p.m. Operate in any position with a minimum of vibration or noise. Compact—fit into 2" circle, 1⁷/₆₄" deep. Speeds from 1/6 r.p.m. to 1800 r.p.m.

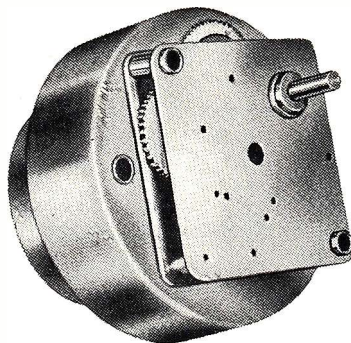
BRISTOL ELAPSED TIME INDICATORS

For industrial or laboratory applications. Model ET-1A counts to 99,999 hours, by hours. Model ET-1B counts to 9,999.9 by tenths of hours. Advantages: Dependable Bristol "Circle B" synchronous timing motor, extreme compactness — 2" diameter by 2¹/₈" depth. Low cost. Easy panel or unit mounting.



BRISTOL LOW SPEED MOTORS

Designed for applications calling for extremely low speeds at light loads. S-200 series available at speeds from 10 revolutions per hour to one revolution per month. Features: Small size—2" diameter by 1⁵/₈" deep. Torque limited by gear train to 1 in. lb. continuous—5 in. lbs. intermittent use.



Bristol Motors are available for 24, 110, or 220 volts, 50-60 cycles. They are widely specified for timing devices, motion displays, defrosters, clocks, washers, ranges, dryers, time delay relays, general control equipment, and many other applications. Reversible and tandem motors are available.



BRISTOL MOTOR DIVISION

VOCALINE COMPANY OF AMERICA, INC.
243 Coulter St., Old Saybrook, Conn.

UNIVERSAL WINDING COMPANY

P. O. BOX 1605, PROVIDENCE 1, R. I.

Chicago Office and Demonstration Room, 9 So. Clinton St., Chicago 6, Ill.

A Wide Range of Winding Machines for a Wide Range of Coils

"LATTICE-TYPE" COILS

Radio and Television



No. 84 Winding Machine

Model	Wire Range	Max. Dia.	Traverse	RPM	Coils at Once	HP	Floor Space
84	#19-42	5"	1/32"-1 1/2"	400-750	1, 2, 3 or 4	1/4	26" x 31"

"Gainer mechanism" and calibrated "strap-type" tensions insure accurate, uniform winding, quick change-over. Simple design, rugged construction assure long life.

LAYER-WOUND COILS

Cotton-Interwoven or Non-Insulated



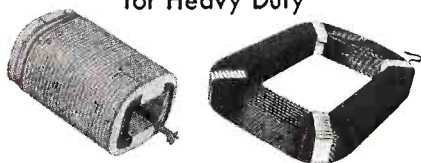
Nos. 96 and 103 Winding Machines

Model	Wire Range	Max. Dia.	Traverse	RPM	Coils at Once	HP	Floor Space
96	#19 to 46	6"	1/16"-3 1/4"	500-1800	1 or 2	1/4	30" x 26"
103	#19-38, 46	7"	1/2"-8"	200-1200	1 or 2	1/2	40" x 36"

Wire and cotton mechanically guided. Automatic counter. Quick change-over. Adjustable for wide range of coil sizes.

GUTTER-WOUND COILS

for Heavy Duty



No. 98 Winding Machine

Model	Wire Range	Max. Dia.	Traverse	RPM	Coils at Once	HP	Floor Space
98	#8-20, 30	1 1/2"	1/4"-12"	35-135	1 or 2	3/4	4'9" x 3'1 1/2"

Automatic guiding. Wire turns placed in grooves formed by preceding layers—for maximum density. Automatic stop at end of coil or end of each layer, as required.

SPOOL-WOUND COILS

No Insulation Between Layers



No. 102 High Speed Winding Machine

Model	Wire Range	Max. Dia.	Traverse	RPM	Coils at Once	HP	Floor Space
102	#20-44	3 1/4"	1/16"-2 7/8"	500-4700	1 Per Head	1/2	51" x 34" (3 heads)

Standard machine, 3 individually operated winding heads. Output is synchronized on basis of handling time per coil. Wire-layer length quickly adjusted. Automatic stop.

PAPER-INSULATED COILS

In Stick Form



Nos. 104 and 107 (Automatic Feed) Winding Machines

Model	Wire Range	Max. Dia.	Traverse	RPM	Coils at Once	HP	Floor Space
104	#19-42	4 1/2"	1/16"-5"	0-2500	3 to 14	1/2	48" x 36"
107	#19-42	4 1/2"	1/16"-5"	0-2500	4-30	1	76" x 42"

Coils wound in stick form—3 to 14 on No. 104; 4 to 30 on No. 107. Sensitive "strap-type" tensions insure smooth flow of finest wires. Paper or acetate sheet automatically inserted. Uniform overlayer at all diameters. Adjustable traverse mechanism. Automatic stop. Rapid transfer of wire turns.

PAPER-INSULATED COILS

Hand-feed



No. 108 Stick Winder — modern - - - flexible

Model	Wire Range	Max. Dia.	Traverse	RPM	Coils at Once	HP	Floor Space
108	#20-42	5"	5/16"-4"	325-2300	4 to 30	1/2	72" x 36"

Manually-operated machine designed for production & job work. Quick set-up. Maximum flexibility. Dial control of adjustments. Strap tensions. Round or rectangular coils. 1/2 in. min. inside diameter with 24, 25, or 26-in. paper.

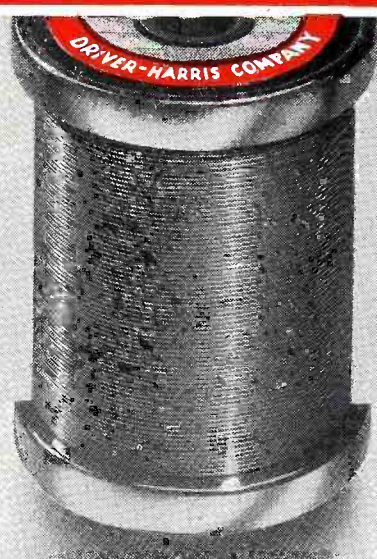
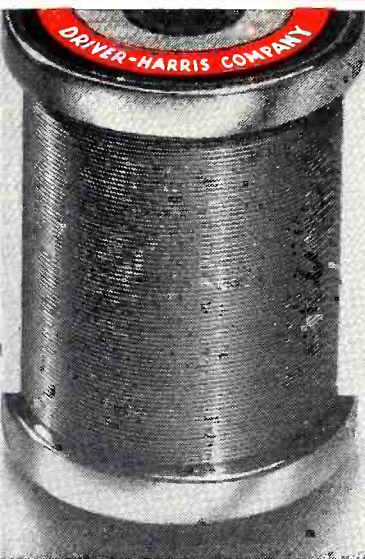
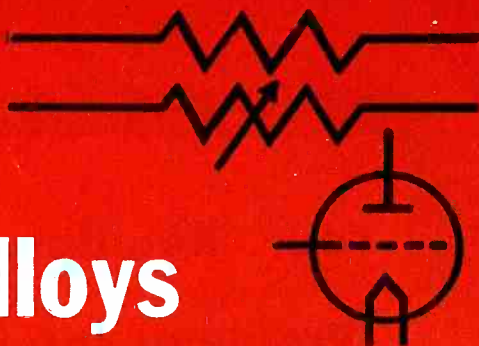


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ACCURATELY . . . AUTOMATICALLY
USE UNIVERSAL WINDING MACHINES

RIVER-HARRIS

WIRE AND RIBBON

Resistance and Radio Alloys



RESISTANCE—There are Driver-Harris Alloys for electrical resistance requirement. Most widely used are: **Nichrome*** and **Nichrome* V**, for winding large value resistors where overall size is limited, but dependability is essential.

Constantan, for fixed stability and constant resistance under normally variable operating conditions; excellent for winding precision bobbins, potentiometers, National Bureau of Standards type resistance standards.

Platinichrome*, most frequently specified for precision resistors in electric meters and laboratory testing devices because of its finer sizes it has a temperature coefficient of only $\pm .00002/^\circ\text{C}$.

Alumel*, high ohmage, 800 ohms/cm² at 20°C., makes extremely small resistors. Especially suitable for series resistors requiring negligible temperature coefficient of resistance. Thermal e.m.f. against copper only .002 millivolts between 0°C. and 100°C. Its higher specific resistance

permits use of larger diameter wire than with other alloys. . . . Plus a total of more than 80 *electrical heat and corrosion-resistant* alloys which singly, or in combination fill any electrical resistance specifications.



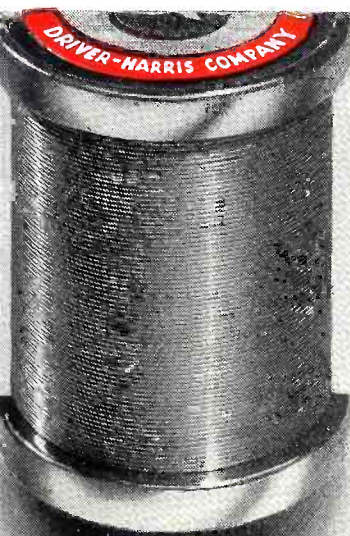
FOR RADIO—Always abreast of the latest developments in radio metallurgy, Driver-Harris has been headquarters for Radio Alloys since the earliest days of the industry. In greatest demand are:

. . . **Nickel and Nichrome***, for plate strip. Thin but rigid, they take a tightly adhering heat radiation coat.

. . . **Gridnic* Alloys**, having a very low electron emission—especially suitable in tubes where back-emission is involved.

. . . **Cathode Sleeve Material**: special melted Nickel Alloys to meet any emission requirements.

Other widely accepted D-H Alloys meeting or exceeding most radio specifications are: *Nilvar**, #42 Alloy, #52 Alloy, and *Nickel "A", "D", "E", "Z"*.



In addition to these we manufacture over 80 different *electrical heat and corrosion-resistant* alloys. If your resistance requirements are different tell us about them and depend on it... Driver-Harris will develop the alloy best suited to your specifications.

Nichrome is made only by

Driver-Harris
COMPANY

HARRISON • NEW JERSEY

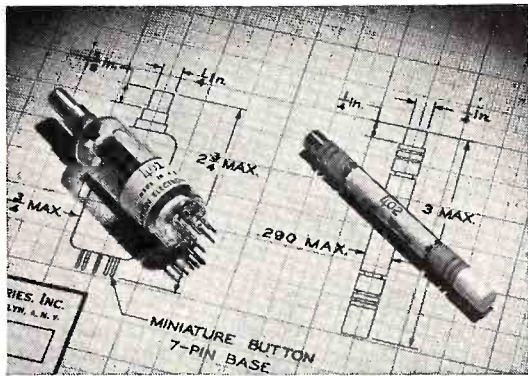
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*Trade Mark Reg. U. S. Pat. Off.

Your "Regulated High Voltage"
Problems can be Economically
Solved . . . **NOW!**

ANTON



JAN APPROVED

AEL has produced and supplied over 100,000 JAN 5962/BS-101 Corona Discharge Voltage Regulator Tubes (equivalent to 401 shown here) to the U. S. Navy—Signal Corps and prime contractors like Admiral, Westinghouse, Kelly-Koett and Hoffman. Because of the experience gained by the mass manufacture of these tubes, AEL is able—now—to furnish Corona Discharge V-R Tubes, both fixed and variable, to suit a wide range of voltage and current applications.

**Corona Discharge V-R Tubes
New Freedom for Circuit Designers**

**SALIENT
FEATURES**

- Stabilized Voltages from 300 to 4000 Volts
- Currents up to 2 milliamperes
- Low Dynamic Resistance
- No hot cathodes
- Unlimited Life
- Weight—less than an ounce
- Size—smaller than a pen

**TYPICAL
APPLICATIONS**

- Cathode Ray Oscilloscopes
- Airborne Radar Power Supplies
- TV receivers and monitors
- Voltage Reference Tubes
- Radiac Equipment
- X-ray Equipment
- Electron Microscopes

Refer to this Buyers' Guide for our Geiger Counter Tubes and allied radioactivity detection equipment listings



ANTON ELECTRONIC LABORATORIES, INC.

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SPERRY GYROSCOPE COMPANY

SPERRY KLYSTRON TUBES and *Microline*† INSTRUMENTS

Stemming from its sponsorship of the development of the klystron in 1938, Sperry has had vast experience in the manufacture of these tubes for low, medium and high power applications. As a result of Sperry's pioneering in microwave measuring techniques, this company has a complete line of *Microline* instruments which include every type of device essential to precision measurement, in the entire microwave field.

For further information on the equipment listed below or on new development of klystrons and microwave test units, write or telephone our Special Electronics Department or our nearest District Office.

OSCILLATORS

Description	Frequency Range in MC	Output Power	Beam Voltage	Reflector Voltage
Reflex Oscillator	750 to 990	5w	1000	0 to -1500
Reflex Oscillator	950 to 1150	5w	1000	0 to -1500
Reflex Oscillator	1850 to 2160	10w	1000	0 to -1000
Reflex Oscillator	2660 to 3310	250mw*	1250	0 to -750
Reflex Oscillator	3300 to 4200	250mw*	1250	0 to -750
Reflex Oscillator	4200 to 5700	250mw*	1250	0 to -750
Reflex Oscillator	5700 to 7500	250mw*	1250	0 to -750
Reflex Oscillator	7500 to 10,300	250mw*	1250	0 to -750
Reflex Oscillator	8500 to 9660	20mw	300	-55 to -220
Reflex Oscillator	5925 to 8100	1w	750	0 to -300
Reflex Oscillator	14,000 to 17,500	25mw	300	0 to -150
Amplifier/Oscillator	6000 to 6300	6w	625	none
Amplifier/Oscillator	** 2600 to 2800	225w	4000	none
Amplifier/Oscillator	2730 to 3330	25w	3000	none
Amplifier/Oscillator	3700 to 4200	10w	750	none
Amplifier/Oscillator	4970 to 5034	9w	1000	none
Amplifier/Oscillator	** 4800 to 5300	500w	5200	none
Amplifier/Oscillator	960 to 1215	30kw	20,000	none
Amplifier/Oscillator	** 9100 to 9500	325w	5000	none
Amplifier/Oscillator	** 9100 to 9500	7.5kw	17,000	none
Amplifier/Oscillator	** 250 to 270 in	350mw	1000	none
Amplifier/Oscillator	** 2500 to 2700 out			
Amplifier/Oscillator	** 715 to 875 in	400mw	1000	none
Amplifier/Oscillator	** 3750 to 6000 out			
Amplifier/Oscillator	** 4500 to 5250 in	1.5w	1000	none
Amplifier/Oscillator	** 9000 to 10,500 out			
Amplifier/Oscillator	** 4700 to 5200 in	600mw	1500	none
Amplifier/Oscillator	**23,500 to 26,000 out			

* Output Power.

** by manufacturer to center frequency specified by customer. An individual trimmer only.

† See Appendix Section for klystron tube fittings.)

U. S. Pat. Off.

BARRETTER AND THERMISTOR MOUNTS

Model	Description	Barretter Type	Frequency Range-kmc	Max. VSWR	Fittings Input	Fittings Output
554	1/8" Coaxial Barretter and Thermistor	811 550	.82-2.0	1.8 1.5	UG-46/U	BNC
163	Type N Coaxial	821	2.5-2.7	1.8	Type N Plug	UHF
85	Type N Coaxial	821	2.7-2.9	1.8	Type N Plug	UHF
164	Type N Coaxial	821	2.9-3.1	1.8	Type N Plug	UHF
245	2" x 1" Waveguide	821	3.7-4.5	1.5	UG-149A/U	UHF
83A	2" x 1" Waveguide	821	4.6-5.65	1.5	UG-149A/U	UHF
253	1 1/2" x 3/4" Waveguide	821	5.3-6.6	1.7	UG-344/U	UHF
212	1 1/2" x 3/4" Waveguide	821	6.0-7.6	1.5	UG-344/U	UHF
184	1" x 1/2" Waveguide	821	8.5-9.6	1.5	UG-39/U	UHF
219C	1" x 1/2" Thermistor Waveguide	—	8.5-9.6	1.5	UG-39/U	BNC

BARRETTER ELEMENTS

811	125 OHMS (see Barretter and Thermistor Mounts)
821	200 OHMS (see Barretter and Thermistor Mounts)

IMPEDANCE METERS

Model	Frequency Range-kmc	Reading Accuracy	Transmission Line Size	Detector Element	Flanges Input	Flanges Output
361A	.65-4.0	0.1mm	1/8" Coaxial	1N21B*	UG-46/U	UG-45/U
299	2.6-4.0	0.1mm	3" x 1 1/2"	1N21B*	UG-214/U	UG-214/U
103B	3.95-6.0	0.1mm	2" x 1"	1N23B*	UG-149A/U	UG-149A/U
201	5.3-8.2	0.1mm	1 1/2" x 3/4"	1N23B*	UG-344/U	UG-344/U
145	8.1-12.4	0.1mm	1" x 1/2"	1N23B*	UG-39/U	UG-39/U
320	18.0-26.5	0.01mm	1/2" x 1/4"	1N26	UG-425/U	UG-425/U
346	26.5-40.0	0.01mm	.360" x .220"	1N53	UG-381/U	UG-381/U

*The Model 821 barretter element can also be used.

IMPEDANCE TRANSFORMERS

Model	Type	Description	Frequency Range-kmc	Max. VSWR	Fittings
363	Double-Slug	1/8" Coaxial	.665-3.7	5-6	UG-46/U and UG-45/U
34A	Triple-Stub	1/8" Coaxial	1.7-3.75	50	UG-46/U and UG-45/U
137	Double-Stub	3/8" Coaxial	2.66-10.3	—	Type N Jack
301	Double-Slug	3" x 1 1/2"	2.6-4.0	10	UG-214/U
109B	Double-Slug	2" x 1" Waveguide	3.95-6.0	8-14	UG-149A/U
117B	Susceptance	2" x 1" Waveguide	3.95-6.0	40	UG-149A/U
202	Susceptance	1 1/2" x 3/4" Waveguide	5.3-8.1	40	UG-344/U
178	Susceptance	1" x 1/2" Waveguide	8.1-12.4	40	UG-39/U
146	Double-Slug	1" x 1/2" Waveguide	8.1-12.4	8-14	UG-39/U

FREQUENCY METERS

Model	Description	Type*	Frequency Range-kmc	Absolute Accuracy	Fittings	
					R-F	Video
124C	Broadband Coaxial	T	.66-3.0	1/1000	Type N	UHF
S22	Detector Wave-meter Kit	T&A	2.4-3.4	1/2000	Type N	UHF
291A	Cavity	T&A	2.575-3.78	1/10,000	Type N	UHF
27B	Coaxial	T	3.5-6.5	1/1000	Type N	BNC
28B	Coaxial	T&A	4.01-6.0	1/10,000	UG-149A/U	UHF
207A	Coaxial	T	5.3-8.1	1/2000	Type N	BNC
208A	Cavity	T&A	5.49-8.1	1/10,000	UG-344/U	UHF
273	Cavity	T&A	8.1-11.9	1/10,000	UG-39/U	UHF
348	Cavity	T&A	13.8-18.0	1/1000	UG-419/U	UHF
349	Cavity	T&A	19.0-26.0	1/1000	UG-425/U	UHF
350	Cavity	T&A	26.5-39.0	1/1000	UG-381/U	UHF
126	Coaxial	A	8.1-10.2	1/2000	UG-39/U	UHF
138A	Cavity	A	8.43-9.66	1/4000	UG-39/U	UHF

*T—Transmission A—Absorption

DIRECTIONAL COUPLERS

Model	Description	Frequency Range-kmc	Attenuation-db	Fittings
517	7/8" Coaxial	.24-48	20-30-40	UG-46/U*
519	7/8" Coaxial	.48-96	20-30-40	UG-46/U*
480	7/8" Coaxial	.96-1.99	20-30-40	UG-46/U*
467	7/8" Coaxial	1.99-4.0	20-30-40	UG-46/U*
306	3"x1/2" Waveguide	2.6-4.0	30	UG-214/U
233	2"x1" Waveguide	4.0-6.0	24	UG-149A/U
321	2"x1" Waveguide	4.0-6.0	30	UG-149A/U
322	2"x1" Waveguide	4.0-6.0	40	UG-149A/U
209	1 1/2"x3/4" Waveguide	5.3-8.1	24	UG-344/U
237	1 1/2"x3/4" Waveguide	5.3-8.1	30	UG-344/U
235	1"x1/2" Waveguide	8.1-12.4	20	UG-39/U
419	1"x1/2" Waveguide	8.1-12.4	30	UG-39/U
234	1"x1/2" Waveguide	8.1-12.4	40	UG-39/U
388	0.702"x0.390" Waveguide	12.4-17.0	20	UG-419/U
413	1/2"x3/4" Waveguide	18.0-26.5	20	UG-425/U
415	1/2"x3/4" Waveguide	18.0-26.5	40	UG-425/U
405	0.360"x0.220" Waveguide	26.5-36.0	20	UG-381/U

*Input fitting. Main line output UG-45/U. Secondary line output, UG-46/U. Adapters (Models 352A and 217) convert these units to Type N.

ATTENUATORS

Model	Description	Frequency Range-kmc	Attenuation-db	Waveguide Size	Fittings
127A	Precision ± .2db	29-32mc	15-95	—	UHF
110	Variable	4.0-6.0	0-20	2"x1"	UG-149A/U
292	Variable	7.0-10.0	2-20	1 1/4"x3/8"	UG-51/U
134A	Calibrated ± .5db	8.5-9.6	2-45	1"x1/2"	UG-39/U
173	Fixed ± 5db	8.5-9.6	3	1"x1/2"	UG-39/U
174	Fixed ± 5db	8.5-9.6	6	1"x1/2"	UG-39/U
183	Fixed ± 5db	8.5-9.6	10	1"x1/2"	UG-39/U
152A	Variable	8.1-12.4	0.5-20	1"x1/2"	UG-39/U
375A	Variable	12.4-18.0	0.5-20	0.702"x0.391"	UG-419/U
290	Variable	3.95-6.0	2-20	2"x1"	UG-149A/U

TERMINATIONS

Model	Description	Frequency Range-kmc	Power Capacity Watts	Max. VSWR	Fittings
637	7/8" Coaxial	.65-3.5	12	1.4	UG-46/U
308	3"x1/2" Waveguide	2.6-4.0	1	1.04	UG-214/U
105	2"x1" Waveguide	3.95-6.0	1	1.04	UG-149A/U
113	2"x1" Waveguide	4.0-6.0	210	1.10	UG-149A/U
214	1 1/2"x3/4" Waveguide	5.3-8.2	1	1.04	UG-344/U
213	1 1/2"x3/4" Waveguide	5.3-8.2	150	1.10	UG-344/U
150	1"x1/2" Waveguide	8.1-12.4	1	1.04	UG-39/U
246	1"x1/2" Waveguide	8.1-12.4	100	1.10	UG-39/U
401	0.702"x0.391" Waveguide	12.4-18.0	100	1.15	UG-419/U
402	0.360"x0.220" Waveguide	26.5-40.0	18	1.15	UG-381/U
495	1"x1/2" Waveguide	8.1-12.4	5	Tunable	UG-39/U

WATTMETER BRIDGES—SIGNAL SOURCES

Model 84C	Wattmeter Bridge*
Model 123B	Wattmeter Bridge*
Model 555	Klystron Power Supply—see Klystrons
Model 296B	Microwave Receiver
Model 38A	F. M. Test Set (Commercial equivalent of the TS-147/B)

*See Barretter & Thermistor Section for units applicable to these bridges.

DETECTORS AND MIXERS

Model	Description	Frequency Range-kmc	Crystal	Input	Fittings	
					Local Osc.	Output
111B	Detector Sect.	3.95-6.0	1N23B	UG-149A/U	none	UHF
206	Detector Sect.	5.3-8.2	1N21B*	UG-344/U	none	UHF
360A	Detector 1"x1/2" Waveguide	8.1-9.6	1N23B*	UG-39/U	none	UHF
357	Detector 0.702" x0.391" Waveguide	12.4-18.0	1N26	UG-419/U	none	UHF
358	Detector 1/2"x1/4" Waveguide	18.0-26.5	1N26	UG-425/U	none	UHF
359	Detector 0.360" x0.220" Waveguide	26.5-40.0	1N53	UG-381/U	none	UHF
337	Mixer 3/8" Coaxial	2.6-4.0	1N23	Type N Female	Type N	UHF
379	Mixer	8.1-12.4	1N23B	UG-39/U	UG-39/U	UHF

*The model 821 barretter element can also be used.

ADAPTERS

Model	Description	Frequency Range-kmc	Fittings
352A	7/8" Coaxial to Type N	0-4.0	UG-45/U Type N Jack
217	7/8" Coaxial to Type N	0-4.0	UG-46/U Type N Jack
354A	7/8" Coaxial to 7/8" Coaxial	0-4.0	UG-45/U UG-45/U
355A	7/8" Coaxial to 7/8" Coaxial	0-4.0	UG-46/U UG-46/U
250	3"x1 1/2" Waveguide to Type N	2.6-4.0	UG-214/U Type N Jack
144A	3"x1 1/2" Waveguide to 7/8" Coaxial	2.6-4.0	UG-214/U UG-45/U
248	2"x1" Waveguide to Type N	3.95-6.0	UG-149A/U Type N Jack
100A	2"x1" Waveguide to 3/8" Coaxial	3.95-6.0	UG-140/U UG-149A/U
204	1 1/2"x3/4" Waveguide to Type N	5.3-8.2	UG-344/U Type N Jack
251	1 1/2"x3/4" Waveguide to 3/8" Coaxial	5.3-7.0	UG-344/U UG-140/U
249	1 1/4"x3/8" Waveguide to Type N	7.0-10.0	UG-51/U Type N Jack
167A	1"x1/2" Waveguide to Type N	8.1-12.4	UG-39/U Type N Jack
486A	SKL to 1"x1/2" Waveguide Transformer Adapter	8.1-12.4	UG-39/U SKL

UG-275/U SKL Cable End Plug.
UG-276/U SKL Right Angle Plug.
UG-131/U SKL Type N Jack Adapter.

TEES AND BENDS

Model	Description	Frequency Range-kmc	Fittings
274	3"x1 1/2" Waveguide—Series Tee	2.6-4.0	UG-214/U
275	3"x1 1/2" Waveguide—Shunt Tee	2.6-4.0	UG-214/U
106A	2"x1" Waveguide—Series Tee	3.95-6.0	UG-149A/U
107A	2"x1" Waveguide—Shunt Tee	3.95-6.0	UG-149A/U
276	1 1/2"x3/4" Waveguide—Series Tee	5.3-8.2	UG-344/U
277	1 1/2"x3/4" Waveguide—Shunt Tee	5.3-8.2	UG-344/U
278	1 1/4"x3/8" Waveguide—Series Tee	7.0-10.0	UG-51/U
279	1 1/4"x3/8" Waveguide—Shunt Tee	7.0-10.0	UG-51/U
165A	1"x1/2" Waveguide—Series Tee	8.1-12.4	UG-39/U
166A	1"x1/2" Waveguide—Shunt Tee	8.1-12.4	UG-39/U
170	1"x1/2" Waveguide—E-Plane Bend	8.1-12.4	UG-39/U
171	1"x1/2" Waveguide—H-Plane Bend	8.1-12.4	UG-39/U
392	0.702"x0.391" Waveguide—Series Tee	12.4-18.0	UG-419/U
393	0.702"x0.391" Waveguide—Shunt Tee	12.4-18.0	UG-419/U
394	1/2"x1/4" Waveguide—Series Tee	18.0-26.5	UG-425/U
395	1/2"x1/4" Waveguide—Shunt Tee	18.0-26.5	UG-425/U
406	1"x1/2" Waveguide—Magic Tee	8.1-12.4	UG-39/U

SHORTS

Model	Description	Frequency Range-kmc	Fittings
636	7/8" Coaxial	.7-4.0	UG-46/U
114A	2"x1" Waveguide	3.95-6.0	UG-149A/U
203	1 1/2"x3/4" Waveguide	5.3-8.2	UG-344/U
377	1"x1/2" Waveguide	8.1-12.4	UG-39/U
372	0.702"x0.391" Waveguide	12.4-18.0	UG-419/U
371	0.360"x0.220" Waveguide	26.5-40.0	UG-381/U

SPERRY GYROSCOPE COMPANY

DIVISION OF THE SPERRY CORPORATION • GREAT NECK, NEW YORK
CLEVELAND • SAN FRANCISCO • SEATTLE • LOS ANGELES • NEW ORLEANS

AGE or PREHEAT

upto 100

vacuum tubes

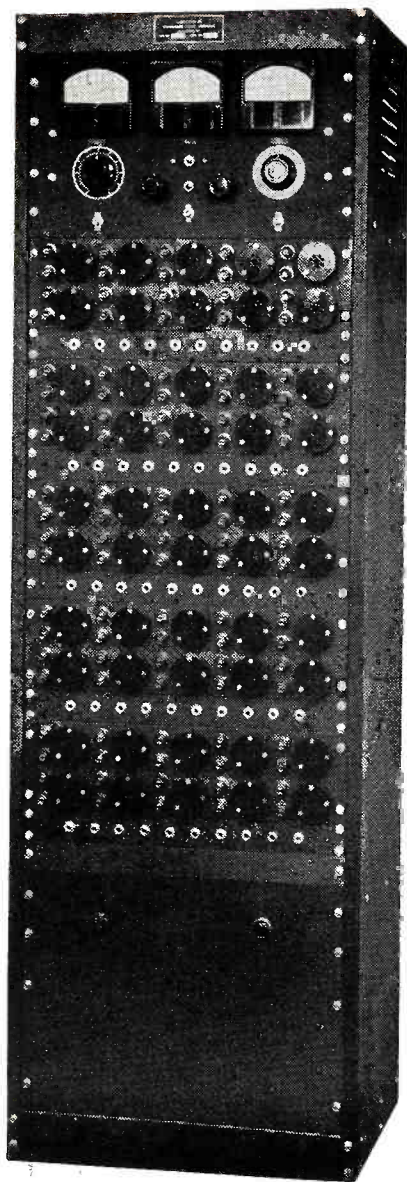
50 hour

ability tests . . .

You can quickly apply any normal voltage and/or load to any tube element for practically all receiving and many transmitting types with the P.T.L. Aging and Plate, filament, screen and grid voltages may be varied as desired.

Multiple banks of ten production type sockets accommodate extra small seven, noval nine or miniature tubes. Each bank is individually controlled so that up to different tube types may be tested simultaneously.

Contained filament and cathode power is supplied together with adequate bias voltages. Overload protection is included in all circuits.



Among the users of PTL equipment are:

RCA

IBM

ECLIPSE PIONEER

ESSEX WIRE

FORD INSTRUMENT

PHILCO

GENERAL MOTORS

ELECTRIC AUTO LITE

REMINGTON RAND

WESTINGHOUSE

Other production equipment:

SYNCHRO ERROR
TEST SET

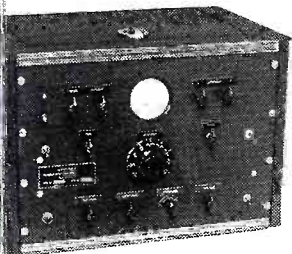
R-F COIL and CONDENSER
TEST SET

VACUUM TUBE TEST SET

*Custom manufacturing and
designing*

**Fast, accurate, VISUAL
indication of the null point
for A-C bridges**

With the P.T.L. Type 239 Bridge Null Indicator you can see by simultaneous and independent indications, the reactive and resistive unbalances of A-C bridges on a 3" cathode ray tube. After a simple initial set-up, no further manual operation is required.



The indicator amplifier has gain sufficient to give 1 inch deflection for 20 microvolts output signal. At maximum sensitivity, the hum and noise level is less than 2 microvolts. Continuous tuning in 9 ranges adequately reduces harmonic errors from 20 cps to 10 Kc. A.V.C. is incorporated to reduce overload distortion and speed production testing. The equipment is very useful in a laboratory as well as being essential for production testing of audio coils, condensers, etc.

WRITE FOR DATA . . .



PENNSYLVANIA TESTING LABORATORY

Specializing in Research, Design, Development and Manufacture of Electronic Production Testing Facilities.

DOYLESTOWN, PENNSYLVANIA

FREQUENCY METERS

Model	Description	Type*	Frequency Range-kmc	Absolute Accuracy	Fittings	
					R-F	Video
124C	Broadband Coaxial	T	.66-3.0	1/1000	Type N	UHF
S22	Detector Wave-meter Kit	T&A	2.4-3.4	1/2000	Type N	UHF
291A	Cavity	T&A	2.575-3.78	1/10,000	Type N	UHF
27B	Coaxial	T	3.5-6.5	1/1000	Type N	BNC
28B	Cavity	T&A	4.01-6.0	1/10,000	UG-149A/U	UHF
207A	Coaxial	T	5.3-8.1	1/2000	Type N	BNC
208A	Cavity	T&A	5.49-8.1	1/10,000	UG-344/U	UHF
273	Cavity	T&A	8.1-11.9	1/10,000	UG-39/U	UHF
348	Cavity	T&A	13.8-18.0	1/1000	UG-419/U	UHF
349	Cavity	T&A	19.0-26.0	1/1000	UG-425/U	UHF
350	Cavity	T&A	26.5-39.0	1/1000	UG-381/U	UHF
126	Coaxial	A	8.1-10.2	1/2000	UG-39/U	
138A	Cavity	A	8.43-9.66	1/4000	UG-39/U	

*T—Transmission A—Absorption

DIRECTIONAL COUPLERS

Model	Description	Frequency Range-kmc	Attenuation-db	Fittings
517	7/8" Coaxial	24-48	20-30-40	UG-46/U*
519	7/8" Coaxial	48-96	20-30-40	UG-46/U*
480	7/8" Coaxial	.96-1.99	20-30-40	UG-46/U*
467	7/8" Coaxial	1.99-4.0	20-30-40	UG-46/U*
306	3"x1/2" Waveguide	2.6-4.0	30	UG-214/U
233	2"x1" Waveguide	4.0-6.0	24	UG-149A/U
321	2"x1" Waveguide	4.0-6.0	30	UG-149A/U
322	2"x1" Waveguide	4.0-6.0	40	UG-149A/U
209	1 1/2"x3/4" Waveguide	5.3-8.1	24	UG-344/U
237	1 1/2"x3/4" Waveguide	5.3-8.1	30	UG-344/U
235	1"x1/2" Waveguide	8.1-12.4	20	UG-39/U
419	1"x1/2" Waveguide	8.1-12.4	30	UG-39/U
234	1"x1/2" Waveguide	8.1-12.4	40	UG-39/U
388	0.702"x0.391" Waveguide	12.4-17.0	20	UG-419/U
413	1/2"x1/4" Waveguide	18.0-26.5	20	UG-425/U
415	1/2"x1/4" Waveguide	18.0-26.5	40	UG-425/U
405	0.360"x0.220" Waveguide	26.5-36.0	20	UG-381/U

*Input fitting. Main line output UG-45/U. Secondary line output, UG-46/U. Adapters (Models 352A and 217) convert these units to Type N.

ATTENUATORS

Model	Description	Frequency Range-kmc	Attenuation Range-db	Waveguide Size	Fittings
127A	Precision ± .2db	29-32mc	15-95	—	UHF
110	Variable	4.0-6.0	0-20	2"x1"	UG-149A/U
292	Variable	7.0-10.0	2-20	1 1/4"x3/8"	UG-51/U
134A	Calibrated ± .5db	8.5-9.6	2-45	1"x1/2"	UG-39/U
173	Fixed ± .5db	8.5-9.6	3	1"x1/2"	UG-39/U
174	Fixed ± .5db	8.5-9.6	6	1"x1/2"	UG-39/U
183	Fixed ± .5db	8.5-9.6	10	1"x1/2"	UG-39/U
152A	Variable	8.1-12.4	0.5-20	1"x1/2"	UG-39/U
375A	Variable	12.4-18.0	0.5-20	0.702"x0.391"	UG-419/U
290	Variable	3.95-6.0	2-20	2"x1"	UG-149A/U

TERMINATIONS

Model	Description	Frequency Range-kmc	Power Capacity Watts	Max. VSWR	Fittings
637	7/8" Coaxial	.65-3.5	12	1.4	UG-46/U
308	3"x1/2" Waveguide	2.6-4.0	1	1.04	UG-214/U
105	2"x1" Waveguide	3.95-6.0	1	1.04	UG-149A/U
113	2"x1" Waveguide	4.0-6.0	210	1.10	UG-149A/U
214	1 1/2"x3/4" Waveguide	5.3-8.2	1	1.04	UG-344/U
213	1 1/2"x3/4" Waveguide	5.3-8.2	150	1.10	UG-344/U
150	1"x1/2" Waveguide	8.1-12.4	1	1.04	UG-39/U
246	1"x1/2" Waveguide	8.1-12.4	100	1.10	UG-39/U
401	0.702"x0.391" Waveguide	12.4-18.0	100	1.15	UG-419/U
402	0.360"x0.220" Waveguide	26.5-40.0	18	1.15	UG-381/U
495	1"x1/2" Waveguide	8.1-12.4	5	Tunable	UG-39/U

WATTMETER BRIDGES—SIGNAL SOURCES

Model 84C	Wattmeter Bridge*
Model 123B	Wattmeter Bridge*
Model 555	Klystron Power Supply—see Klystrons
Model 296B	Microwave Receiver
Model 38A	F. M. Test Set (Commercial equivalent of the TS-147/B)

*See Barretter & Thermistor Section for units applicable to these bridges.

DETECTORS AND MIXERS

Model	Description	Frequency Range-kmc	Crystal	Fittings		
				Input	Local Osc.	Output
111B	Detector Sect.	3.95-6.0	1N23B	UG-149A/U	none	UHF
206	Detector Sect.	5.3-8.2	1N21B*	UG-344/U	none	UHF
360A	Detector 1"x1/2" Waveguide	8.1-9.6	1N23B*	UG-39/U	none	UHF
357	Detector 0.702" x0.391" Waveguide	12.4-18.0	1N26	UG-419/U	none	UHF
358	Detector 1/2"x1/4" Waveguide	18.0-26.5	1N26	UG-425/U	none	UHF
359	Detector 0.360" x0.220" Waveguide	26.5-40.0	1N53	UG-381/U	none	UHF
337	Mixer 3/8" Coaxial	2.6-4.0	1N23	Type N Female	Type N	UHF
379	Mixer	8.1-12.4	1N23B	UG-39/U	UG-39/U	UHF

*The model 821 barretter element can also be used.

ADAPTERS

Model	Description	Frequency Range-kmc	Fittings
352A	7/8" Coaxial to Type N	0-4.0	UG-45/U Type N Jack
217	7/8" Coaxial to Type N	0-4.0	UG-46/U Type N Jack
354A	7/8" Coaxial to 7/8" Coaxial	0-4.0	UG-45/U UG-45/U
355A	7/8" Coaxial to 7/8" Coaxial	0-4.0	UG-46/U UG-46/U
250	3"x1 1/2" Waveguide to Type N	2.6-4.0	UG-214/U Type N Jack
144A	3"x1 1/2" Waveguide to 7/8" Coaxial	2.6-4.0	UG-214/U UG-45/U
248	2"x1" Waveguide to Type N	3.95-6.0	UG-149A/U Type N Jack
100A	2"x1" Waveguide to 3/8" Coaxial	3.95-6.0	UG-140/U UG-149A/U
204	1 1/2"x3/4" Waveguide to Type N	5.3-8.2	UG-344/U Type N Jack
251	1 1/2"x3/4" Waveguide to 5/8" Coaxial	5.3-7.0	UG-344/U UG-140/U
249	1 1/4"x3/8" Waveguide to Type N	7.0-10.0	UG-51/U Type N Jack
167A	1"x1/2" Waveguide to Type N	8.1-12.4	UG-39/U Type N Jack
486A	SKL to 1"x1/2" Waveguide Transformer Adapter	8.1-12.4	UG-39/U SKL

UG-275/U SKL Cable End Plug.
UG-276/U SKL Right Angle Plug.
UG-131/U SKL Type N Jack Adapter.

TEES AND BENDS

Model	Description	Frequency Range-kmc	Fittings
274	3"x1 1/2" Waveguide—Series Tee	2.6-4.0	UG-214/U
275	3"x1 1/2" Waveguide—Shunt Tee	2.6-4.0	UG-214/U
106A	2"x1" Waveguide—Series Tee	3.95-6.0	UG-149A/U
107A	2"x1" Waveguide—Shunt Tee	3.95-6.0	UG-149A/U
276	1 1/2"x3/4" Waveguide—Series Tee	5.3-8.2	UG-344/U
277	1 1/2"x3/4" Waveguide—Shunt Tee	5.3-8.2	UG-344/U
278	1 1/4"x3/8" Waveguide—Series Tee	7.0-10.0	UG-51/U
279	1 1/4"x3/8" Waveguide—Shunt Tee	7.0-10.0	UG-51/U
165A	1"x1/2" Waveguide—Series Tee	8.1-12.4	UG-39/U
166A	1"x1/2" Waveguide—Shunt Tee	8.1-12.4	UG-39/U
170	1"x1/2" Waveguide—E-Plane Bend	8.1-12.4	UG-39/U
171	1"x1/2" Waveguide—H-Plane Bend	8.1-12.4	UG-39/U
392	0.702"x0.391" Waveguide—Series Tee	12.4-18.0	UG-419/U
393	0.702"x0.391" Waveguide—Shunt Tee	12.4-18.0	UG-419/U
394	1/2"x1/4" Waveguide—Series Tee	18.0-26.5	UG-425/U
395	1/2"x1/4" Waveguide—Shunt Tee	18.0-26.5	UG-425/U
406	1"x1/2" Waveguide—Magic Tee	8.1-12.4	UG-39/U

SHORTS

Model	Description	Frequency Range-kmc	Fittings
636	7/8" Coaxial	7-4.0	UG-46/U
114A	2"x1" Waveguide	3.95-6.0	UG-149A/U
203	1 1/2"x3/4" Waveguide	5.3-8.2	UG-344/U
377	1"x1/2" Waveguide	8.1-12.4	UG-39/U
372	0.702"x0.391" Waveguide	12.4-18.0	UG-419/U
371	0.360"x0.220" Waveguide	26.5-40.0	UG-381/U

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CLEVELAND • SAN FRANCISCO • SEATTLE • LOS ANGELES • NEW ORLEANS

AGE or PREHEAT

up to 100

vacuum tubes

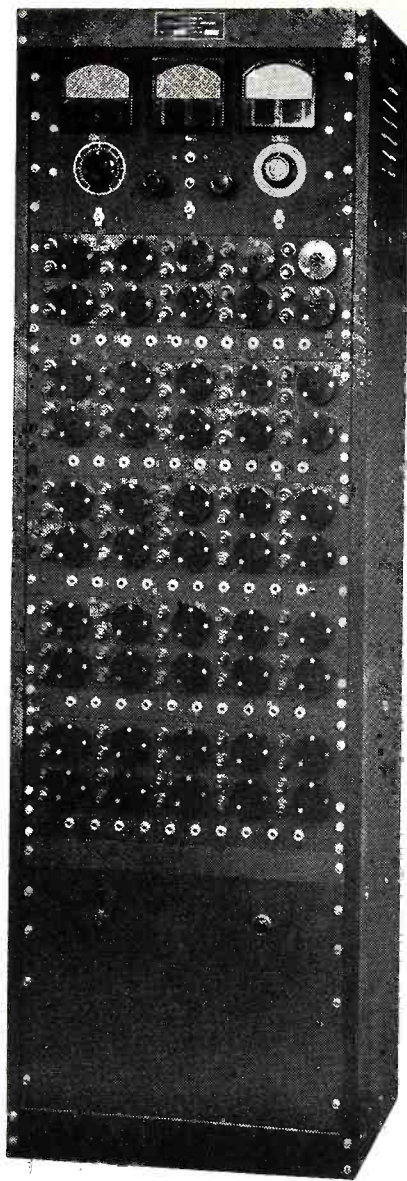
for 50 hour

reliability tests . . .

You can quickly apply any terminal voltage and/or load to any tube element for practically any receiving and many transmitting types with the P.T.L. Aging Block. Plate, filament, screen and grid voltages may be varied as desired.

Multiple banks of ten production-type sockets accommodate all, small seven, noval nine or miniature tubes. Each bank is individually controlled so that up to ten different tube types may be tested simultaneously.

Self contained filament and heater power is supplied together with adequate bias voltages. Overload protection is included in all circuits.



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PHILCO

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WESTINGHOUSE

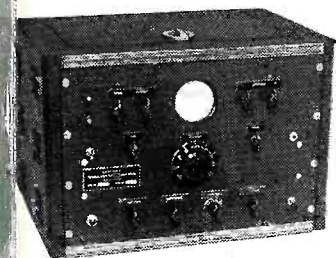
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**R-F COIL and CONDENSER
TEST SET**

VACUUM TUBE TEST SET

*Custom manufacturing and
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DOYLESTOWN, PENNSYLVANIA



ANTENNA MANUFACTURERS FOR THE ELECTRONIC INDUSTRY

MICROWAVE ANTENNAS

Workshop antennas are widely used in microwave communications. Railroads, pipelines, utilities, television relay, and overseas networks have found Workshop precise engineering and rugged construction to fully meet their requirements. Workshop was first with a complete microwave antenna line, and continuing development by the Gabriel Laboratories maintains that leadership.

940 mc—For the 940 mc band a center-fed parabolic antenna is available in diameters of four or six feet. Both models terminate with a weatherproof type "N" connector for use with RG-8/U cable.

2000 mc—A new Offset Feed Antenna has been designed to cover the entire 2000 mc band requiring only one feed. The offset design removes the horn feed from the radiated field of greatest intensity, resulting in less energy being reflected into the horn feed. Measurements of 1.2 maximum VSWR can be maintained over the 1700 to 1990 mc band with this six-foot antenna.

7000 mc—After years of development and research, the engineers of the Gabriel Laboratories have produced a sensational antenna feed with outstanding electrical characteristics. This new antenna feed design maintains a VSWR of less than 1.13 over a 300 mc band for each of nine models covering a range of 5900 to 7425 mc. Available in 4-, 6-, and 8-foot diameters.

Accessories—Heavy-duty Workshop mounting clamps, model CP-4 6, provide a tilting range up to 3 3/4° and attach to pipe diameters of 2 1/2" to 4". Specifically designed for the harshest weather conditions, the Workshop heater permits continuous antenna operation in sleet, hail, ice, or snow.

UHF TELEVISION TRANSMITTING ANTENNAS

To meet the broadest requirements of isolated communities as well as large metropolitan areas, the Gabriel Laboratories has designed a high-gain UHF television antenna for Workshop which combines simplicity, ruggedness, and reliability.

With 25 and 14 power gain models in production, this new antenna is already rated as one of the best by electronic engineers. Its radiation pattern is the closest approach to a cosecant curve of any antenna now available. Efficient electrical design provides excellent impedance characteristics and makes possible null fill-in and adjustable beam tilt, if desired.

A standard input flange for 3 1/8" coaxial line makes the antenna readily adaptable to the use of waveguide. In addition, provisions for mounting a 300 mm beacon are incorporated in the antenna top.

Simple mechanical design results in a relatively low-cost antenna which has no insulator except for gas seal, no de-icing problems, and no field repair problems. The plastic weatherizing windows which protect the radiating structure are dyed "international orange," according to the latest F.C.C. regulations, so that the antenna never requires painting. Galvanized, welded steel construction assures excellent rigidity, corrosion resistance, and long life.

COMMUNICATION ANTENNAS

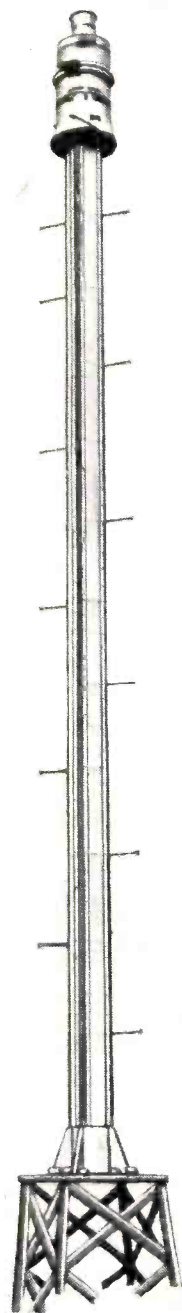
Directional—Workshop Directional Antennas are expressly designed for commercial point-to-point communications. Six-element arrays, consisting of two bays of reflector, dipole, and director provide unparalleled performance. A model for each frequency band assures constant impedance and a low VSWR for maximum efficiency. Models cover the 29 to 50 mc, 72 to 76 mc, and 140 to 174 mc bands.

Beacon—For omni-directional coverage Workshop High-Gain Beacon Antennas give you performance that is outstanding and dependable. These antennas are "series fed" to insure that the power is equally divided between the radiating dipoles for concentration of energy on the horizon. All radiating elements are completely weatherproofed. Models are available for the 144 to 162 mc and 450 to 470 mc bands.

ENGINEERING AND CONTRACT SERVICE

Workshop handles scores of special government and commercial antenna problems every year from design through production. New acquisitions of \$300,000 in machine tools provide one of the most complete antenna production facilities in the world, available for the design, manufacture and test, to your specifications, of complete antenna assemblies. These new facilities are supplemented by the Gabriel Laboratories in Needham, Mass., which has long enjoyed a reputation as one of the leading antenna laboratories.

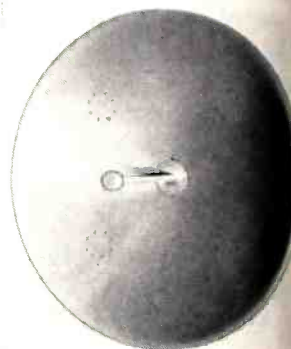
If your product or service requires antennas or waveguide components—research, design, test or production—get in touch with Workshop. Write or phone Norwood 7-3300.



UHF transmitting antenna for television—featuring null fill-in, a Workshop exclusive.



Model 2K6T, six-foot offset feed antenna, covers entire 2000 mc band.



Model 7K4B2, four-foot parabolic antenna, for 7000 mc band.



Model 9406, six-foot diameter antenna, covers the 920-960 mc band.

WORKSHOP ASSOCIATES DIVISION
THE GABRIEL COMPANY
ENDICOTT STREET NORWOOD, MASS.



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exacting manner
that it
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QUALITY INSTRUMENTS WIDE RANGE PERFORMANCE LABORATORY & PRODUCTION



**PAIRED PULSES
TIME MARKERS**

PC-100 Pulse Calibrator

1 μ s width pairs with 5 to 5000 μ s interval
50 to 5000 pps rate • 1, 10, 100 μ s markers

FAST PULSES

.05 TO 1000 μ S

PG-200A Pulse Generator



width, position • single pulse to 20000 pps
0.03 μ s rise, decay • to 100 v • 50 Ω int Z



**GERMANIUM
DIODE TESTS**

DT-100 Diode Tester

to 150 v, 5 ma reverse • 2 v, 500 ma forward
pre-set, variable • fast, accurate readings

20 FREQUENCIES

20~ TO 100KC

TO-100 Test Oscillator



with \pm 10% calibrated control • 1% stability
25 v, 21 ma • 18 or 600 Ω Z • 1% distortion

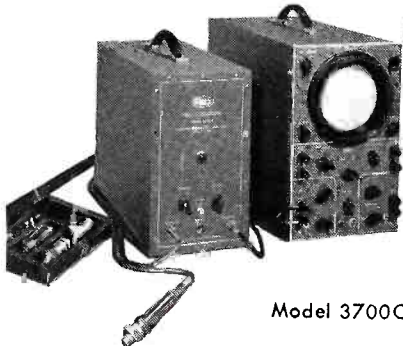


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ACCURATE GUIDE^{CO}

PRESSURE RESEARCH
VELOCITY MEASUREMENT
DISPLACEMENT MEASUREMENT
STRUCTURAL MEASUREMENT



Model 3700C

STABILIZED
Electro Pressuregraph
ELECTRONIC EQUIPMENT

Measures and records pressure time studies of dynamic or transient pressure phenomena. Drift and temperature stabilized. Up to 200' of pick-up cable can be used. Range: .5 to over 5,000 PSI. Frequency response: 1 to 20,000 CPS.

Applications: Engine cylinder pressure studies. Engine analysis for servicing. Carburetor development. Fuel research. Hydraulic valve lifts. Injector pressure studies. Oil pump development. Explosions in power transformers.

Electro Magnetic Pickup
ELECTRONIC EQUIPMENT

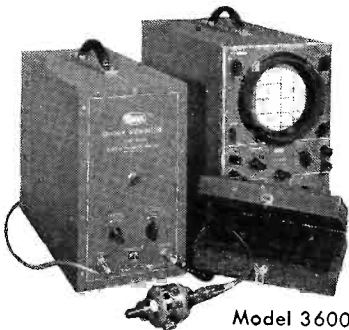


Model 3010-A

New magnetically operated impulse generator indicates rate of motion at all speeds without physical contact. Motion of nearby metal object produces a voltage output proportional to object's rate of motion or speed. Requires no external magnet, can be actuated by any magnetic material on a moving part.

Applications: Used for precision ignition timing. Acceleration and velocity studies. Synchronizes voltages for oscillograph; markers for angular or linear position. Indicates RPM, operations, angular or linear motion. Serves as tachometer when used with voltmeter. Controls electrical devices.

Electro Dynamic Micrometer
ELECTRONIC EQUIPMENT

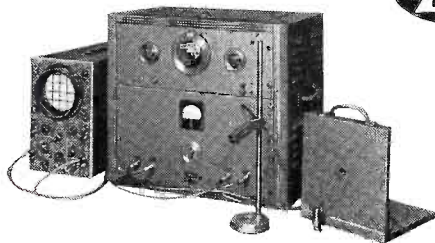


Model 3600-A

Measures and records dynamic or static displacement, vibration or movement of any metal body without contact, down to .0001 inch. Measures eccentricity, axial vibration, radial whip, bearing clearance, radial expansion with acceleration and reciprocating movement.

Applications: Vibration in motors. Valve travel, bounce. Eccentricity of commutators, slip rings. Travel, bounce of relay contacts. Shaft whip. Whip of pulleys, wheels, gears.

Electro Sonometer
ELECTRONIC EQUIPMENT



Model 4100

Measures Young's modulus of elasticity by means of sound vibrations to determine resonant frequency of any solid material for structural characteristics.

Pick-up at end of object, converts vibration from driver at other end into electrical energy, as oscillator is tuned to proper frequency, meter shows point of resonance.

Applications: Metal, Carbon Electrodes, Aluminum, Wood, Castings, Concrete.

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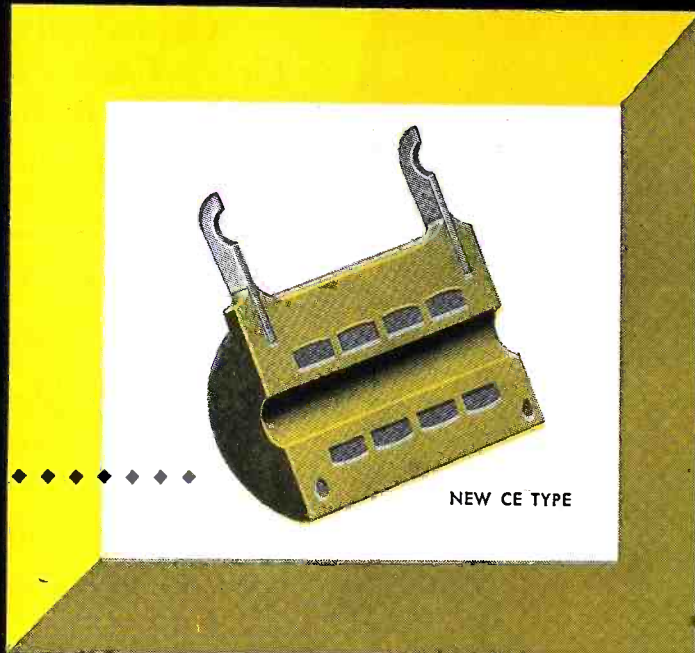
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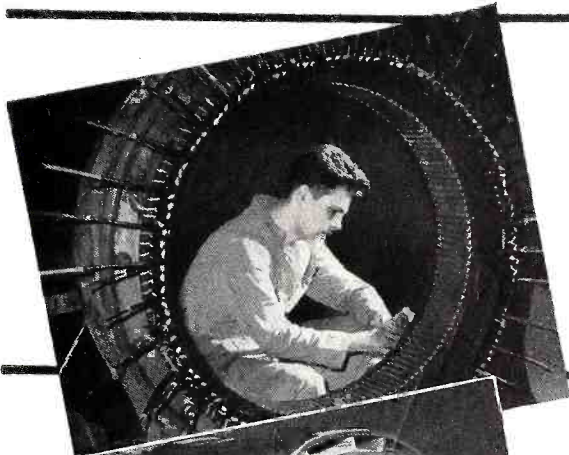
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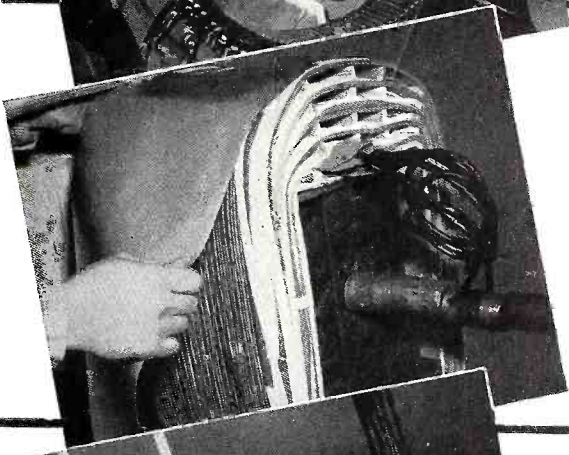


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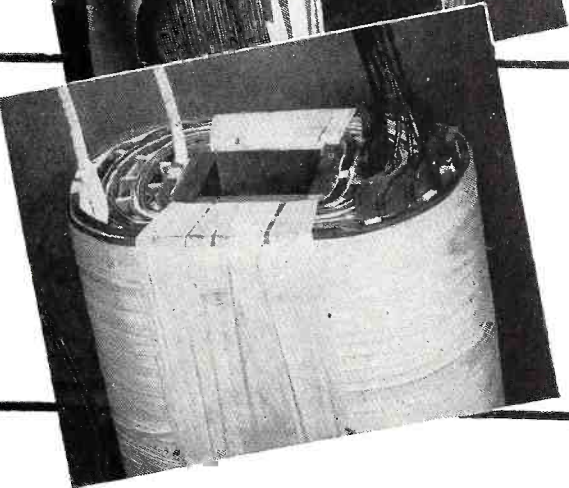


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*Extra Flexible Varnished Fiberglas**
Open Weave Fiberglas* Cloth coated with a film of flexible varnish.

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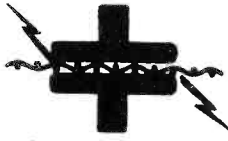


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A flexible insulation with great resistance to excessive moisture and high temperatures.

Extra-Thin High Temperature Insulation
Light weight Silicone coated Fiberglas* and inorganic asbestos paper.

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Duplex and tri-ply glass and asbestos combination for Class B and Class H application.

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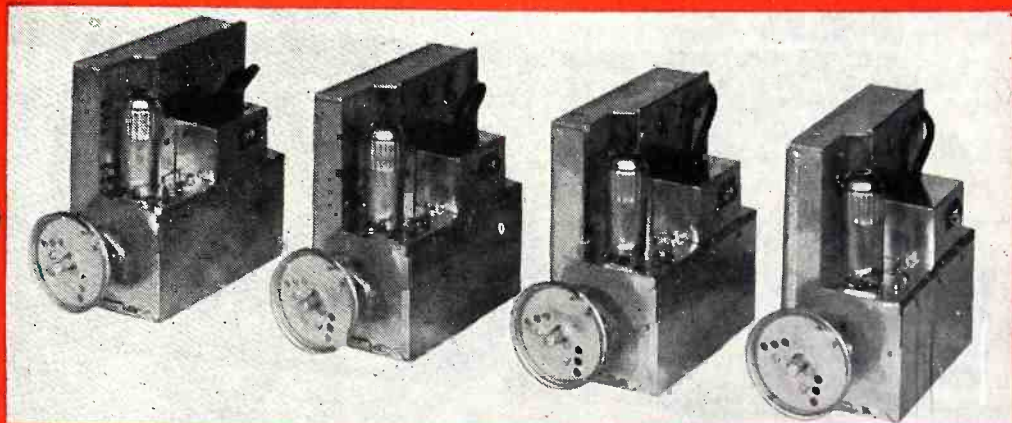
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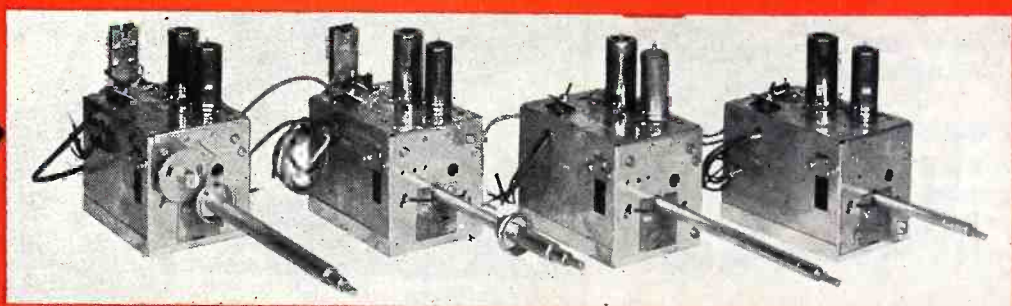
**UHF
CONVERTERS**



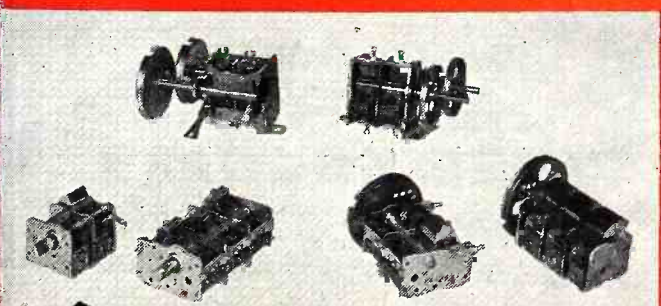
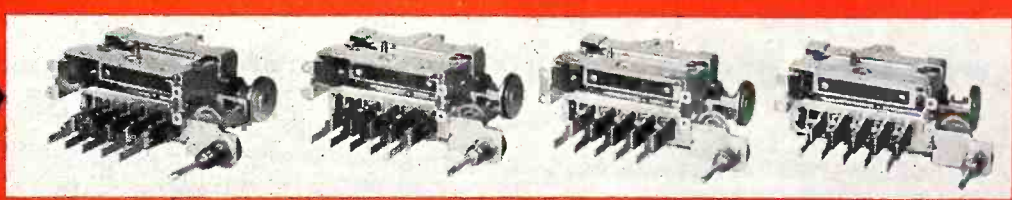
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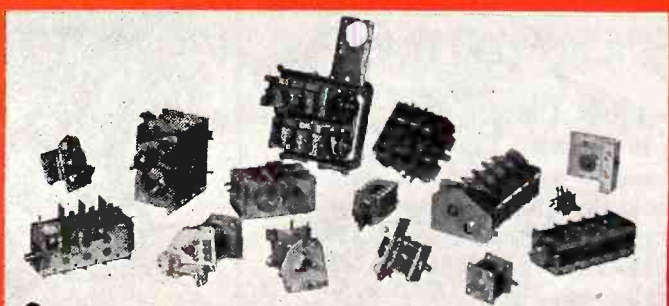
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MYCALEX 410 IS APPROVED FULLY AS GRADE L-4B UNDER NATIONAL MILITARY ESTABLISHMENT SPECIFICATION JAN-I-10 "INSULATING MATERIALS, CERAMIC, RADIO, CLASS L." CAN BE INJECTION MOLDED, WITH OR WITHOUT METAL INSERTS, TO EXTREMELY CLOSE TOLERANCES.

CHARACTERISTICS

Power Factor, 1 megacycle.....0.0015
 Dielectric Constant, 1 megacycle.....9.2
 Loss factor, 1 megacycle.....0.014
 Dielectric Strength, volts/mil.....400
 Volume Resistivity, ohm-cm..... 1×10^{15}
 Arc Resistance, seconds.....250
 Impact Strength, Izod
 ft.-lb./in. of notch.....0.7
 Max. Safe Operating Temp. °C.....350
 °F.....660
 Water Absorption, % in 24 hours.....nil
 Coefficient of Linear
 Expansion, °C 11×10^{-6}
 Tensile Strength, psi.....6000
 Compression Strength, psi.....25000

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MYCALEX 410X

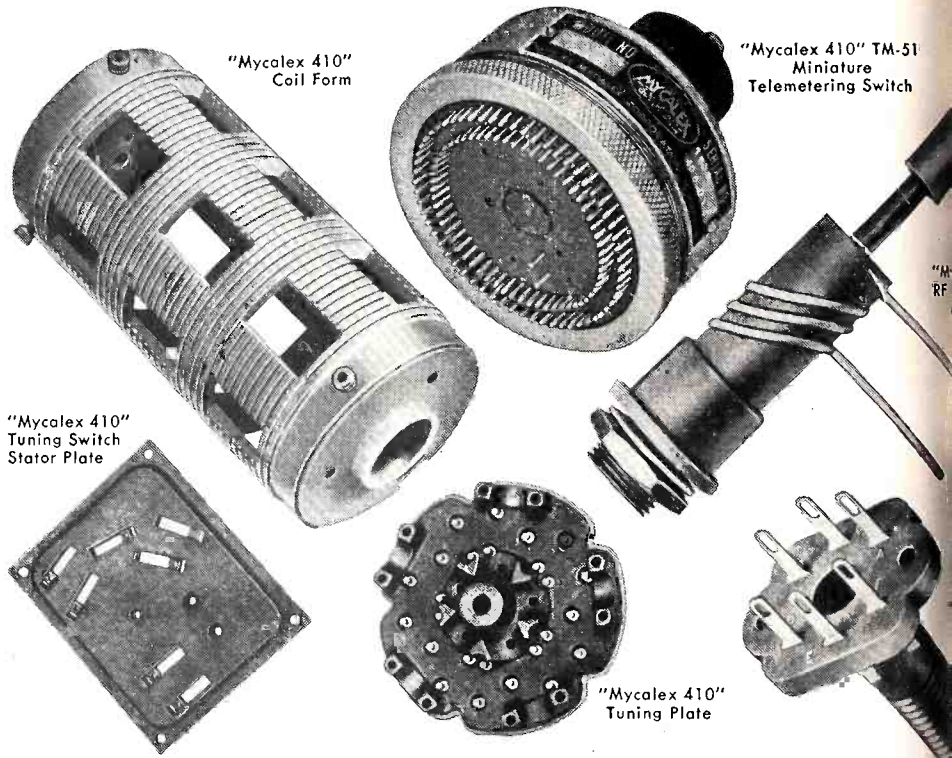
MYCALEX 410X CAN BE INJECTION MOLDED, WITH OR WITHOUT METAL INSERTS, TO EXTREMELY CLOSE TOLERANCES.

CHARACTERISTICS

Power Factor, 1 megacycle.....0.012
 Dielectric Constant, 1 megacycle.....6.9
 Loss factor, 1 megacycle.....0.083
 Dielectric Strength, volts/mil.....400
 Volume Resistivity, ohm-cm..... 5×10^{14}
 Arc Resistance, seconds.....250
 Impact Strength, Izod,
 ft.-lb./in. of notch.....0.6
 Max. Safe Operating Temp. °C.....350
 °F.....660
 Water Absorption, % in 24 hours.....nil
 Coefficient of Linear
 Expansion, °C 12×10^{-6}
 Tensile Strength, psi.....6000
 Compressive Strength, psi.....28000

- a superior inorganic glass-bonded mica insulation featuring

- LOW LOSS — HIGH EFFICIENCY
- HIGH DIELECTRIC STRENGTH
- IMPERVIOUS TO OIL OR WATER
- FREEDOM FROM CARBONIZATION
- PERMANENT DIMENSIONAL STABILITY
- WITHSTANDS HIGH TEMPERATURE
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"Mycalex 410" Coil Form

"Mycalex 410" TM-51 Miniature Telemetering Switch

"Mycalex 410" Tuning Switch Stator Plate

"Mycalex 410" Tuning Plate

AVAILABLE IN SHEETS, RODS, AND FABRICATED TO SPECIAL SHAPES

MYCALEX

LOW-LOSS MINIATURE, SUB-MINIATURE AND UHF TUNER TUBE SOCKETS

These sockets cost no more than ordinary phenolic types yet electrical characteristics are far superior. Dimensional accuracy and uniformity are unexcelled.

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MYCALEX 410 is approved fully as Grade L-4B under N.M.E.S. JAN-I-10 "Insulating Materials, Ceramic, Radio, Class L."

MYCALEX 410X is lower in cost but its insulating properties greatly exceed those of general purpose phenolics.

Both types available in 7- and 9-pin miniature, sub-miniature and UHF. All are injection molded to high precision.

Mycalex Low Loss UHF Tuner Tube Socket

7-Pin Miniature Tube Socket with Four Ground Lugs

9-Pin Miniature Snap Saddle Type Tube Socket



MYCALEX CORPORATION OF AMERICA

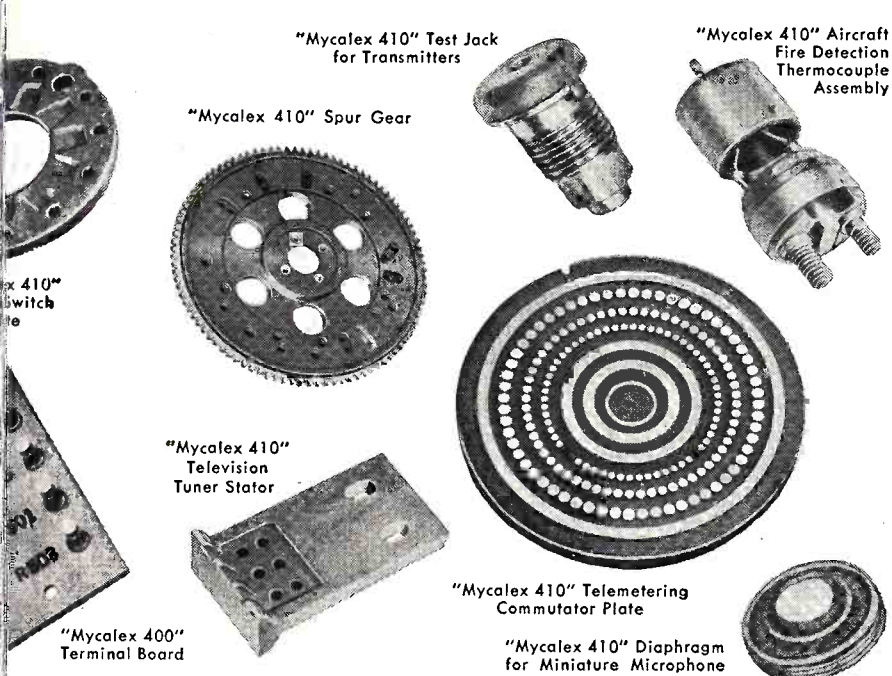
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As a highly developed glass-bonded mica insulation backed by over a century of continued research and successful performance. In its present state of development, MYCALEX combines every important characteristic of a modern, permanent, efficient electrical insulating material. MYCALEX is supplied in sheets or rods, can be injection or compression molded in any shape, is readily machineable, and can be fabricated in practically any shape. Dielectric losses are very low from 60 cycles to 24 kilomegacycles per second, arc resistance, volume resistivity and other electrical characteristics meet the most rigorous requirements. Physical properties are equally outstanding.



"Mycalex 410" Test Jack for Transmitters

"Mycalex 410" Aircraft Fire Detection Thermocouple Assembly

"Mycalex 410" Spur Gear

"Mycalex 410" Television Tuner Stator

"Mycalex 410" Telemetering Commutator Plate

"Mycalex 410" Diaphragm for Miniature Microphone

"Mycalex 400" Terminal Board

**CAN BE TAPPED, DRILLED, THREADED
GROUND, OR MOLDED WITH INSERTS**

MYCALEX

GENERAL CATALOG and ENGINEERS' HANDBOOK

Your copy of the new up-to-the-minute MYCALEX CATALOG and ENGINEERS' HANDBOOK will be sent on request. Tells the entire MYCALEX insulation story—Contains factual information including manufacturing, and practical manufacturing data—types of MYCALEX, grades, properties of dielectrics, compression molded grades, machined insulators, etc.

Available on request, these data sheets cover the entire line of MYCALEX tube sockets—miniature, sub-miniature and UHF—available in all types of mountings: regular saddle for top or bottom mounting, snap saddle, four ground lug saddle and JAN types. MYCALEX tube sockets offer outstanding advantages over practically every other type, yet are priced competitively with the cheapest sockets available anywhere. Get the facts today!

**LITERATURE, INFORMATION OR QUOTATIONS—
WRITE OR WIRE 150 CLIFTON BLVD., CLIFTON, N. J.**

MACHINEABLE GRADES:

MYCALEX 400

MYCALEX 400 IS APPROVED FULLY AS GRADE L-4A UNDER NATIONAL MILITARY ESTABLISHMENT SPECIFICATION JAN-I-10 "INSULATING MATERIALS, CERAMIC, RADIO, CLASS L."

CHARACTERISTICS

Power Factor, 1 megacycle.....	0.0018
Dielectric Constant, 1 megacycle.....	7.4
Loss Factor, 1 megacycle.....	0.013
Dielectric Strength, volts/mil.....	500
Volume Resistivity, ohm-cm.....	2×10^{15}
Arc Resistance, seconds.....	300
Impact Strength, Izod, ft.-lb./in. of notch.....	1.85
Max. Safe Operating Temp., °C.....	370
.....°F.....	700
Water Absorption, % in 24 hours.....	nil
Coefficient of Linear Expansion, °C.....	10.2×10^{-6}
Tensile Strength, psi.....	6000
Compressive Strength, psi.....	35000

★ ★ ★

MYCALEX K-10

CHARACTERISTICS

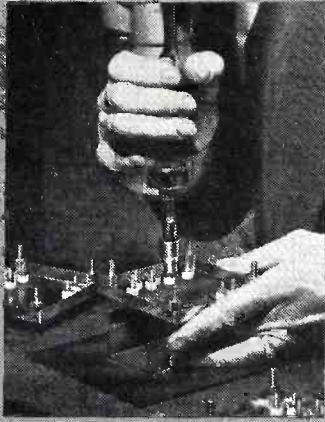
Dielectric Constant, 1 megacycle.....	10.6
Q Factor, 1 megacycle.....	310
Loss factor, 1 megacycle.....	0.034
Volume Resistivity, ohm-cm.....	3.0×10^{14}
Dielectric Strength, volts/mil (0.10 in. thickness).....	270
Fractional Decrease of Capacitance with Temperature Change.....	0.0056
Fractional Increase of Capacitance with Temperature Change.....	0.0076
Max. Safe Operation Temperature, °C.....	400

MYCALEX K EMBRACES AN ENTIRE SERIES OF CAPACITOR DIELECTRICS, EACH WITH SPECIFIC CHARACTERISTICS. THESE CAN BE SUPPLIED ON SPECIAL ORDER IN SHEETS 14" x 18" IN AREA AND FROM 1/8" TO 1" IN THICKNESS, ALSO AVAILABLE IN RODS. MYCALEX K CAN BE MACHINED, AND MYCALEX KM MOLDED TO CLOSE TOLERANCES.

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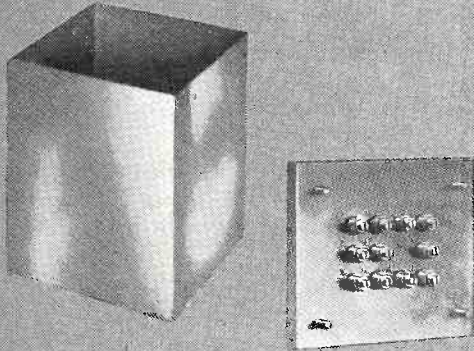
**assembly service for
hermetic sealing of electronic units**



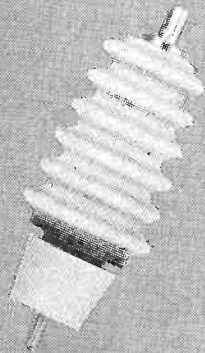
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Heldor!

**cans and covers to mil-t-27
and commercial specifications**



**compression-type hermetic seal
bushings and terminals**



Heldor's vast background and facilities as the leading manufacturer of components for hermetic sealing are now being used by producers of selenium rectifiers, oil-filled condensers, transformers and similar electronic units for the complete final assembly and the actual hermetic sealing. Heldor's Assembly Service, to them, offers 5 major advantages:

1 SAVE MONEY

As manufacturers of components for hermetic sealing—cans, covers and terminals—HELDOR is in the unique position of being able to save money on the complete assembly of hermetically sealed electronic units. Several manufacturers, now using this Heldor Assembly Service, have eliminated their own hermetic sealing operations because this HELDOR service saved them substantial sums of money.

2 NO PARTS INVENTORY

When HELDOR does the complete assembly and sealing of your products, you no longer need an inventory of components. HELDOR maintains its own inventory of MIL-T-27 and NON-STANDARD cans and covers as well as compression-type terminals.

3 SPEEDY DELIVERY

HELDOR'S production facilities enable it to deliver completely assembled units—already hermetically sealed—much faster (and less costly) than you can do it in your own plant. Many manufacturers in your field have already discovered this fact . . . to their obvious advantage. Why not you?

4 NO HEADACHES

As one of the nation's leading specialists in hermetic sealing and its allied fields, HELDOR'S background and technical "know-how" is second-to-none. You can forget about the problems of hermetically sealing components when you use HELDOR Assembly Service.

5 MADE TO YOUR SPECIFICATIONS

HELDOR'S precision production and assembly service is geared to meet the most rigid of hermetic sealing specifications.

**TRY HELDOR ON YOUR NEXT HERMETIC SEALING PROBLEM.
SEND US YOUR SPECIFICATIONS!**

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frequency oscillator provides fundamental output over entire if and rf ranges, with controlled check points at 2.5-Mc and intervals. Provides 4.5-Mc crystal-signal for inter-carrier alignment and markers at TV carrier frequencies. Output useful in the UHF range. 39C is a heterodyne frequency meter, standard (with 3 crystals supplied), a horn generator, and a TV re-broadcast set. Complete with cable.



Television Sweep Generator
WR-59C

Covers all VHF TV channels on preset fixed positions. Continuous tuning range from 300 Kc to 50 Mc covers video and intermediate frequencies. Precision-type vibrating capacitor provides up to 12-Mc maximum sweep width, flat within ± 1 db, with good linearity. Has balanced output dual-piston attenuator for varying output voltage from 0.1 volt to 5 microvolts. Includes blanking for zero-reference line on 'scope. Complete with cables.



Master VoltOhmyst®
WV-87A

Has big $7\frac{1}{2}$ " meter. Measures dc voltages accurately in high-impedance circuits, with ac present. Also reads rms values of sine waves and peak-to-peak values of complex waves or recurrent pulses, with dc present. Measures resistance from 0.1 ohm to 1000 megohms, current from 10 microamperes to 15 amperes. Features $\pm 1\%$ tolerance multiplier and shunt resistors, a meter movement having an accuracy within $\pm 2\%$ and a tracking error of only $\pm 1\%$. AC operated. Complete with cables and probes.



Ohmyst®

measures complex waves from 0.2 volt volts, peak-to-peak. Has an over-all accuracy for dc measurements of $\pm 3\%$ full scale dc voltage from 0.02 volt to ... rms values of sine-wave voltages volt to 1500 volts. Has 7 non-skip ranges for both resistance and voltage. Frequency response flat from 30 cps to approximately 150 Mc up to 150V range. AC operated. Complete with cables and probes.



Junior VoltOhmyst®
WV-77A

Measures dc from 0.05 volt to 1200 volts; ac from 0.1 volt to 1200 volts rms; and resistance from 0.2 ohm to 1 billion ohms; five overlapping ranges in each case. Uses electronic bridge circuit, 200-microampere meter movement and $\pm 1\%$ carbon-film multiplier resistors. Over-all accuracy, $\pm 3\%$ for dc measurements on plus setting. Frequency response flat from 30 cps to 3 Mc up to 60V range. AC operated. Complete with cables and probes.



on scope

CR tube and direct-coupled, push-pull, amplifier. Frequency-compensated and calibrated attenuators. Front-panel 1-volt peak-to-peak calibrating voltage with screen scaled for direct reading of peak voltage. Response flat to dc, less than -2 db at 500 Kc. Deflection sensitivity, 10.6 millivolts per inch. Input resistance, 10 megohms. Capacitance probe, 10 megohms. Probe diameter 9.5 mmf. Complete with cables.



Special-Purpose Probes

High-voltage probes for measuring voltage of TV power supplies and other high-voltage sources. WG-289 has microphone-type connector; WG-290 has phone-tip connectors. WG-264 Crystal-Diode Probe, for measuring ac voltages from 10 Kc to 250 Mc. WG-291 Demodulator Probe, for observing envelope of modulated waveforms. WG-222 DC/Direct Probe of slip-on type, with built-in 1 megohm resistor. Slide switch permits measuring resistance, dc voltage, and ac voltage without changing probes.



Television Oscilloscope
WO-56A

Uses 7" CR tube and direct-coupled, 3-stage, push-pull, vertical and horizontal amplifiers. Dual controls for "coarse" and "fine" adjustments. Frequency-compensated and voltage-calibrated attenuators on both amplifiers. Response flat within -2 db from dc to 500 Kc, within -6 db at 1 Mc. Vertical deflection sensitivity, 10.6 rms millivolts per inch. Magnetic shield on CR tube. Cables included.



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Through an exclusive new design and manufacturing process (patent pending) developed by ASTRON engineers, the new Blue-Point capacitors provide heat and moisture protection to a degree never before possible in molded plastic capacitors. The blue point which identifies this capacitor bonds itself to the outer shell and leads, forming the tightest seal against moisture ever produced. Dry-assembled for consistent high quality and protection against contamination. Mineral-oil impregnated for continuous operation at 85°C. Heat resistant, non-inflammable outer shell and bond will not burn or melt under soldering iron. Positive anchored leads.

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Metallized Paper Capacitors

Ideal for military and commercial applications due to their extremely small size, light weight and unique self-healing properties. The ultimate in capacitor miniaturization and dependability, available in a wide variety of standard and special types.

HY-METS*, ASTRON's newly developed high temperature METALITE metallized paper capacitors provide all the desirable features of METALITE capacitors plus operation over a wide temperature range to +125°C. with exceedingly dependable performance characteristics.

*Trade Mark

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requirements to

INSTRUMENT CORP. OF AMERICA

for miniature

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Wherever extreme dimensional precision, accurate concentricity and high dielectric qualities are required, the electro-deposition method is recommended . . . the production of which is licensed under an exclusive arrangement with the Electro Tec Corporation.

TYPICAL SPECIFICATIONS:

Sizes: .035" to 24"
Cylindrical or Flat

Cross-sections: .005 to
.060" or more

Finish: Polish to 4
Micro-Inches or Better

Breakdown: 1000 V or More
Hi-Pot Inter-Circuit

Ring Hardness: 75 to 90 Brinell

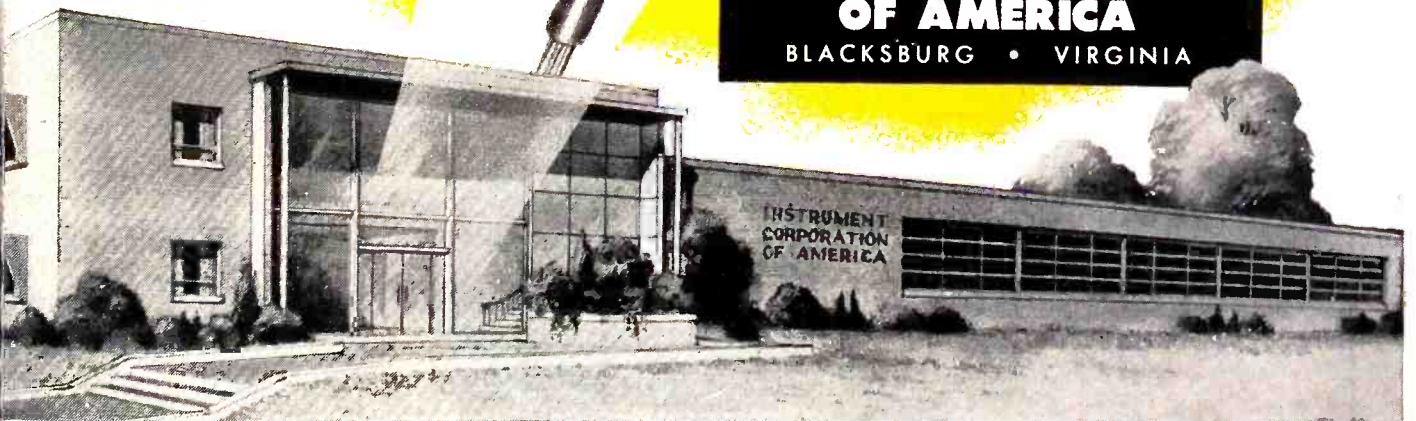
Rotation Speeds: To Over 12000 RPM

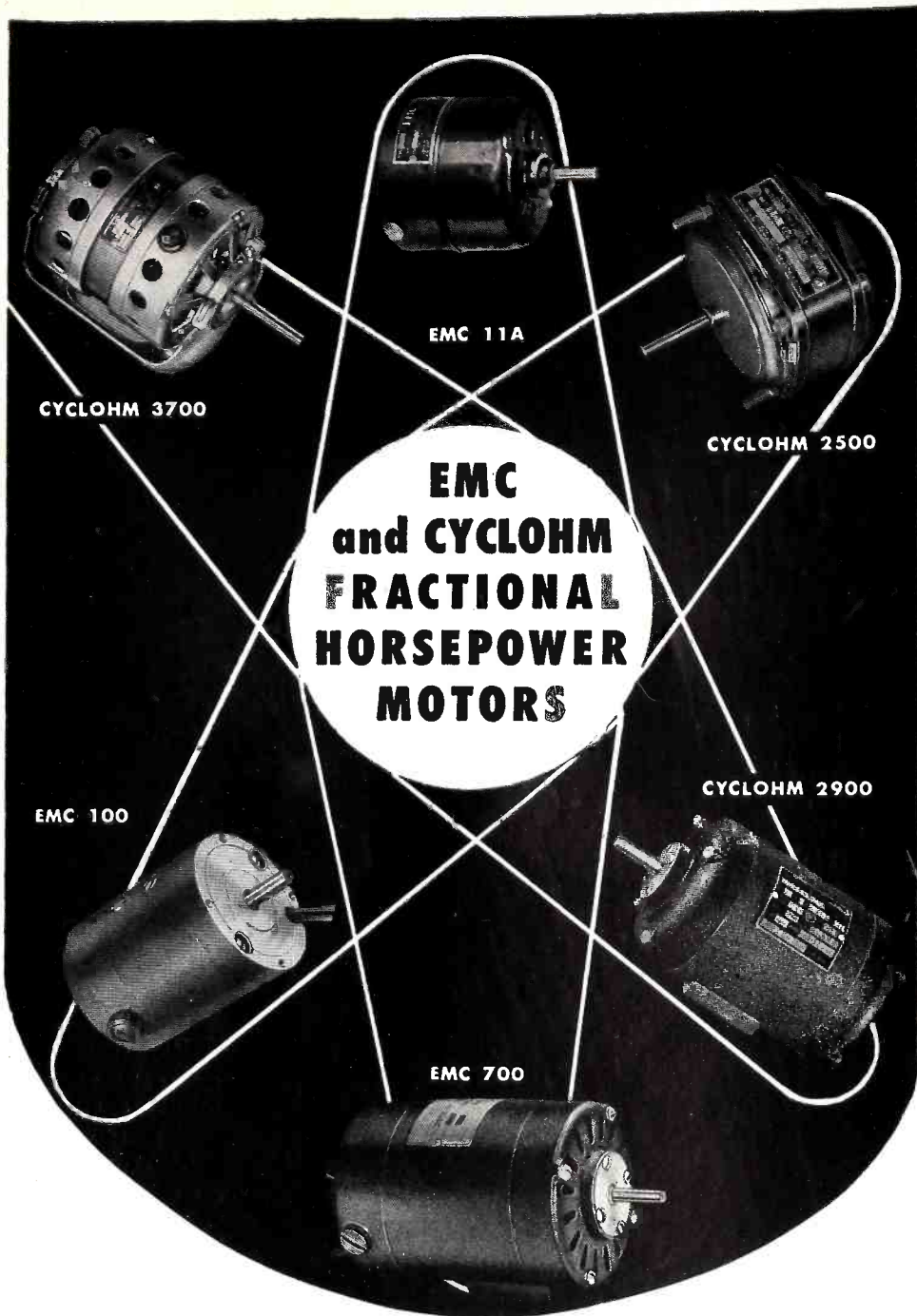
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Greater load capacity
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To 10,000 OHMS
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- **VIBRATION**
Excellent characteristics
due to short armature
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500 volt any terminal
to ground
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Miniature tube socket
- **PHYSICAL SIZE**
3/4" x 1-11/16"

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Avien's gages must be more accurate than yours. That's why manufacturers and engineers are coming to Avien.

If you were at the instrument panel of a jet, a transport, a four-engine bomber...

You want the most accurate "advice" in the world! Avien gages are examples of the excellent advice a pilot gets from Avien gages:

GO HOME! With unequaled accuracy, Avien fuel gages tell the pilot when it's time to turn back. Avien gages work gravimetrically, with no moving parts in the fuel tank.

SWITCH TANKS! On planes with many fuel tanks, Avien gages tell him exactly where the fuel is. Avien also makes fuel control systems that automatically maintain center-of-gravity location.

STOP FUELING! On transports, Avien's more accurate gages permit a closer computation of fuel load — allows a pilot to carry a heavier payload.

SLOW DOWN! When Avien's Jet Tailpipe Thermometer tells the pilot "too hot" the pilot knows it's time to ease off and cool down. The servo principle gives this gage longer scale.

OPEN COWL! On reciprocating-engine aircraft, the Avien Cylinder Head Temperature Indicator gives warning before the engine heat exceeds safe operating limits. Again, new accuracy using the servo principle.

TAKE OFF! Avien's Jet Engine Thrustmeter tells a quick power story for jets, tells the pilot exactly what power is available.

Avien gages are not only more accurate and reliable — they're smaller, simpler, lighter. That means benefits in building planes as well as flying them.

Right now, Avien produces over 10,000 major instrument components each month for the aviation industry.

We've attracted a lot of new business, and a lot of top-notch engineers. We want more of both. If you're an aircraft manufacturer, call us right now. If you're a good engineer, send a detailed resume to Department E.

Speaking of engineers, one of our top men was asked a question recently about other fuel gages in the field.

"We're making them obsolete," he said. Then he added thoughtfully: "Even some we've made ourselves."



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EDISON

Hermetically Sealed

TIME DELAY RELAYS

APPLICATIONS: Cathode Protection • Gyro Erection • Motor Starting • Integration • Holdovers • Overload Protection • Cycling Durations • Current Interruptions • Emergency Circuit Switchovers

MODEL 501

SPECIAL FEATURES:

- Precision Timing: Factory adjusted after sealing
- Rugged Construction: Ceramic base; all parts welded or riveted exclusive shock springs
- Exclusive spring-mounted contact minimizes contact chatter and relieves stress of bimetal flexure
- Hermetically Sealed in independent arc-quenching atmosphere for extra long life

SPECIFICATIONS:

- Vibration and Shock Resistant: Withstands vibration of 1/16" overall amplitude at 55 cps and impact of 50 g
- Ambient Compensated: from -60 to +85° C
- Mounting: Standard intermediate octal socket
- Seated Height: 3 1/4" Diameter: 1 1/4" Weight: 1 1/2 to 2 1/4 ounces
- Contacts: SPST N/O Heater Input: 5 watts nominal
- Tolerances: Reoperating time ±20%
Recovery time ±20%
Heater voltage ±10%. Contact operation will be positive but some variation in timing will occur.
- Ambient: At -60 or +85° C timing may vary an additional 10% over 25° C tolerances.

STANDARD TYPES

TYPE NUMBERS NOMINAL HEATER VOLTAGES			OPERATING TIME		REOPERATING TIME**		CONTACT RATING xxx	
117V.	26.5V.	6.3V.	Nom. Sec.	Tol. Sec. ±	Instant. Sec. ± 20%	Saturated Sec. ± 20%		
B2050	B2051	B2052	2	0.5	3.5	45	3.0 AMP 150 v. D.C. or 250 v. A.C.	
B2101	B2021	B2022	5	1	5	50		
B2102	B2012	B2023	10	2	2.5	25		
B2103	B2013	B2024	20	3	6.5	45		
B2104	B2014	B2025	30	5	4.5	30		
B2105	B2015	B2026	45	7	4	40		
B2131	B2034	B2037	60	9	3.5	35		
B2106	B2016	B2026	75	12	1.5	20		
B2140	B2041	B2042	90	14	75	110		3.0 AMP 450 v. D.C. or 450 v. A.C.
B2107	B2017	B2027	105	16	35	70		
B2132	B2035	B2038	120	18	30	60		
B2108	B2018	B2028	150	23	65	175		
B2133	B2036	B2039	180	27	40	135		
B2109	B2019	B2029	210	32	35	125		
B2110	B2020	B2030	300	45	55	185		

** At Nominal Voltage and 25° C.

xxx Contacts—silver, normally open. Tungsten available for 6 amp. rating.

STANDARD TYPES—MODEL 207

Nominal	TYPE NUMBER Heater Voltage		OPERATING TIME*		RE-OPERATING TIME**	
	115V	27.5V	6.3V	Nom. Sec.	Tol. Sec.	Inst. Sec.	Sat. Sec.
B-5200	B-5210	B-5220	5	1	14	15
B-5201	B-5211	B-5221	10	2	7	10
B-5202	B-5212	B-5222	20	3	22	38
B-5203	B-5213	B-5223	30	5	17	30
B-5204	B-5214	B-5224	45	7	11	20
B-5205	B-5215	B-5225	60	9	33	57
B-5206	B-5216	B-5226	75	12	26	38
B-5207	B-5217	B-5227	90	14	20	25
B-5208	B-5218	B-5228	105	16	18	16
B-5209	B-5219	B-5229	120	18	16.5	10

*At Nominal Voltage and 25° C



MINIATURE
THERMAL
RELAY
Model
207

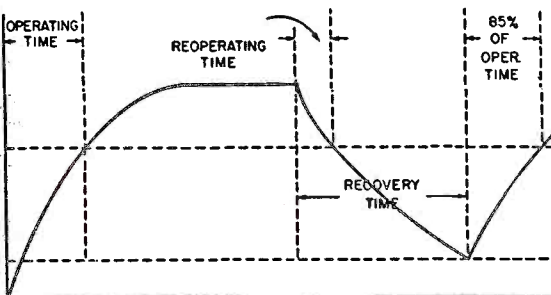
THERMAL
RELAY
Model
501
with
NEW
TIMING
ADJUSTMENT

TIMING VALUES

Operating Time: the interval, in seconds, between the application of heater voltage and relay contact closure.

Reoperating Time*: the interval, between removal of heater voltage and opening of relay contacts.

Recovery Time*: the interval between removal of heater voltage and restoration of 85% of the Operating Time. (The figures of 85% has been arbitrarily selected in order to define this value more accurately because of the asymptotic nature of the heating and cooling curves.)



Operation when heater voltage is maintained until bimetals reach saturation temperature.

*NOTE: INSTANTANEOUS VALUES are those obtained by opening heater circuit the instant contacts operate. SATURATED VALUES are those obtained by opening heater circuit after heater has been energized long enough to thermally saturate entire structure. Saturation time varies from 3 minutes for short time relays to 1 hour for long time relays.

MODEL 207 MINIATURE

Meets vibration and shock requirements for airborne and industrial applications

Ambient Compensated: -60 to +85° C

Seated Height: 2 1/4" Diameter: 3/4"

Mounting: Miniature button 7-pin Weight: 1/2 ounce

Contacts: SPST N/O Contact Rating: 2.5 amps @ 125 v. ac. Heater Input: 2.5 watts (Nominal)

Delay Periods: 5-120 seconds

Tolerances: Reoperating Time ±20% at nominal voltage and 25° C

Recovery Time ±20% at nom voltage and 25° C

Heater voltage ±10%. Contact operation will be positive but some variation in timing will occur.



YOU CAN ALWAYS RELY ON EDISON

EDISON

Sealed THERMOSTATS

Edison Sealed Thermostats are single-pole, single-throw (normally open or closed), temperature operated electric switches, hermetically sealed in an inert, arc-quenching gas.

BASIC ADVANTAGES

SEALED ASSEMBLY—Operation not affected by any form of dust, moisture, grease, oil, dirt, corrosion—or time. Operate safely in explosive atmospheres.

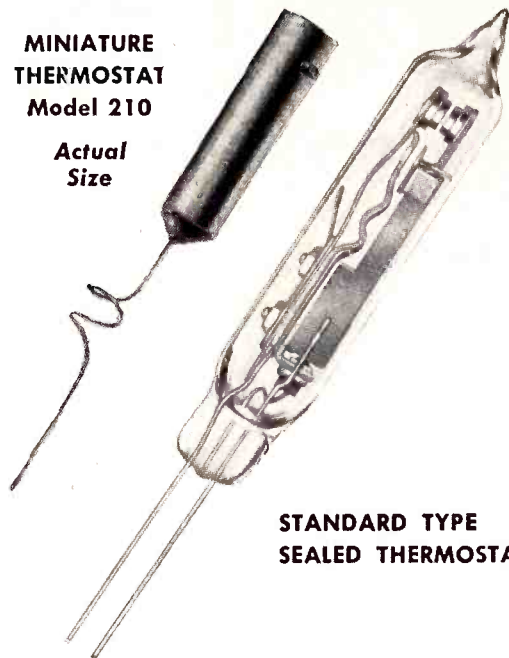
CLOSE DIFFERENTIAL—Operation without snap action eliminates mechanical inertia, resulting in practically zero temperature differential—in cases less than 0.1° C.

RESPOND TO ALL TYPES OF HEAT—Radiant energy passes freely through glass envelope, and conducted or convected heat is rapidly transferred to bimetal contact arm by the encased gas.

RUGGED AND DURABLE—Withstand shock up to 50G. Provide long dependable service without change of original control point in locomotive car wheel bearings, embossing presses, heavy machinery. Many given current breaks every few seconds over years of operation without any apparent wear.

MINIATURE THERMOSTAT Model 210

Actual
Size



STANDARD TYPE
SEALED THERMOSTAT

5. MINIMUM VIBRATION EFFECTS—Unaffected by vibration up to .031" amplitude, at frequencies from 0 to 60 cps. Will operate satisfactorily in any position—either fixed or changing.

	STANDARD TYPES			
	S1-1A	S1-2A	D1-2A or 2B	D8-2A or 2B
CHARACTERISTICS	Most sensitive and accurate Edison thermostat. For highest precision sets within $\pm 0.5^\circ\text{C}$ of specified control point and holds it within $\pm 0.2^\circ\text{C}$ of set temperature at $\frac{1}{4}$ amp load when properly applied.	Lowest priced sealed Thermostat. Carries highest rating of Underwriters' Lab. for sensitivity and dependability when mounted for fire alarm service.	Primarily designed for low voltage, low current applications, continuous duty. Platinum contacts.	The General purpose Edison thermostat.
USES	Continuous service wherever extreme accuracy and dependability required. Satisfactory where contact must be made and broken every few seconds over years.	For alarm and low-wattage control service.	General control use at voltages below 25 volts and currents under 2 amperes.	General control use. Continuous operation for years without change in operating temperature.
APPLICATIONS	Radio crystal ovens, fine instruments, air conditioning, railway car temperature control.	Diesel engine bearings and radiators, motor windings, railway wheel bearings, converter ovens, etc.	Crystal ovens—temperature control of electronic measuring equipment.	Radio transmitters, transformers, ovens, air ducts, etc.

Specifications—standard types

Specifications for Edison Sealed Thermostats, unmounted

Catalog No.*	S1-1A	S1-2A	D1-2A D1-2B	D8-2A D8-2B
Length—A Type	2 3/8"	2 3/8"	2 5/8"	2 5/8"
Length—B Type			3"	3"
Diameter	3/8"	3/8"	9/16"	9/16"
Maximum Amperage	1.0	0.5†	2.0	8.0
Recommended Max. Amperage for Close Control	0.25	0.25	1.0	4.0
Maximum Wattage	150	100	300	1000
Maximum Voltage AC or DC	250	250	250**	250**
Maximum Temp.	150° C	190° C	320° C	320° C
Calibration Tolerance	$\pm 0.5^\circ\text{C}$	$\pm 2.5^\circ\text{C}$	$\pm 2.5^\circ\text{C}$	$\pm 2.5^\circ\text{C}$

* "A" designates both leads from one end, from each end.

** When ordering please specify voltage.

† One ampere in alarm service.

MINIATURE THERMOSTAT—Model 210

Durable • Dust and moisture-proof • Suitable for long continuous service • Bimetal and contact spring firmly secured in ceramic bushing • Bimetal cannot be overstressed.

SPECIFICATIONS

Voltage	6-125 volts, a.c.	Case	Nickel plated brass
Current	1 amp at 115 volts a.c.; .5 amp at 115 volts d.c.	Weight	7.3 grams
Wattage	100 watts max.	Diameter	.318-.310"
Temperature Range	-50 to +350° F (Factory preset)	Length	1 1/4"
Temperature Tolerance	$\pm 5^\circ\text{F}$		
Stable	$\pm 60^\circ\text{F}$ from original setting		
Construction	Rigid or flexible—Length 2 1/2"		
Response	18 seconds (lag factor) in agitated water bath		
Contacts	N/O or N/C Platinum-Iridium		

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INSTRUMENTS

FOR COUNTING AND CONTROL

GLOW TRANSFER COUNTER

Model 162 may be used as a counter, or as a fast push-button resettable Register, or as a slow scaler. This self-indicating counter has a maximum capacity of 1,000,000 counts and maximum speed of 2,000 CPS. Accepts positive or negative pulses, 5 to 75 volts. Resetting is by manual push button or remote control. (See tube description below.)



PRE-SET COUNTER (Glow Transfer)

Model 164 is used for batch or operational counting and recording at any pre-set count from 0 to 9,999. Maximum counting speed is 4,000 CPS; pre-set operation totalizer count — 0 to 999,999, indicated by electro-mechanical register. Counting units and relay are plug-in type for easy removal or replacement. Register has plug-in type connection. Prototype shown at left.



REGULATED HIGH VOLTAGE SUPPLIES

The 306R series are low current, stabilized High Voltage Supplies with continuously variable output from 500 to 3000 volts D.C. (to 2000 volts @ 1MA.) Output regulation — less than 0.01 percent output change per percent input change. Choice of positive or negative grounded models; single unit in cabinet, or for rack mounting; or double unit, either polarity, on single rack panel. *Inquire about other types of high voltage supplies.*



GLOW TRANSFER COUNTING TUBES*

For use in totalizers, batch counters, and where capabilities of mechanical registers are exceeded, these tubes offer comparatively high speed, lack of moving parts, and silent operation. Self-indicating, with low current drain; tubes may be cascaded, reset by push-button. Decade or scale of 12 tubes with counting speeds to 2,000 CPS now available; higher speeds available soon.

* Ericsson Telephones, Ltd., (Etelco) tubes are distributed solely in the U.S. and Canada by Atomic.

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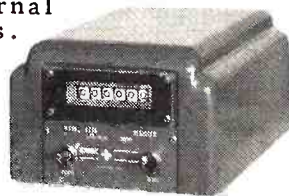
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Write for name of Sales Representative in your area.

ELECTRICAL RESET REGISTERS

Model 1238B used singly or in multiples (with selective resetting) serves as production control, time element registers, and many other purposes. The electrically actuated six-digit register may be reset by panel switch, remotely by push-button, or by wired connection to counting units. Another model, #1248B, has predetermined count for controlling external circuits. Models are available uncased for use in original equipment.



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SPECIALISTS
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"Long Life"
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Roanwell has a vast experience in the engineering and manufacturing of a variety of push-button and thru-cord switches. Made to rigid specifications under quality control procedures approved by military agencies. Typical Roanwell developments are shown below.



No. 238. Compact, positive acting, long-life shorting type switch; 3-contact normally open, for press-to-talk, to-signal, or to-operate. Detent action gives positive assurance of make and break. Solid silver contacts and shorting bar.



No. 959. Exclusive detent switch with coil spring in unique over center design to insure long life. Waterproof in use, due to molded rubber switch cover on operating lever. Double pole permits simultaneous use of two separate circuits; obtained as a conventional DPST switch.



No. 961. Same as No. 959, except push button is used to actuate detent spring. . . . Both #959 and #961 are life-tested for over 1-million operations under normal operating conditions.

THRU-CORD SWITCH #992

Designed so that cordage connections are clear of switch mechanism; 2 independent SPST switches; single lever operations. First circuit may be locked in position.



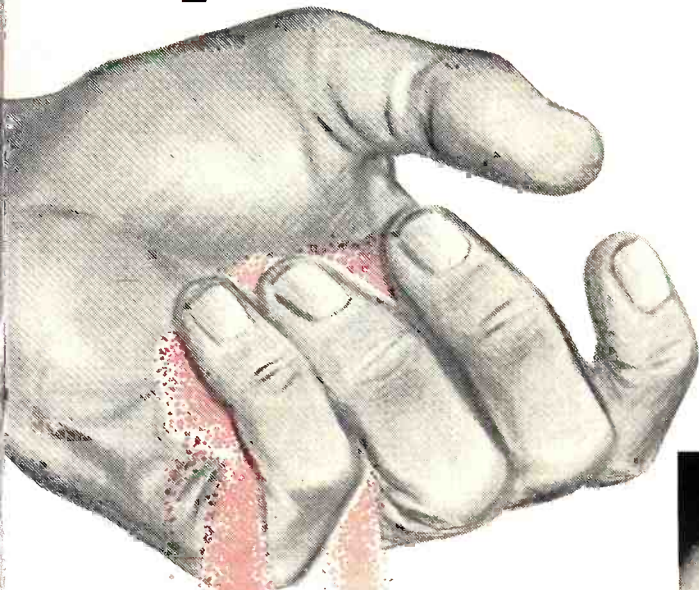
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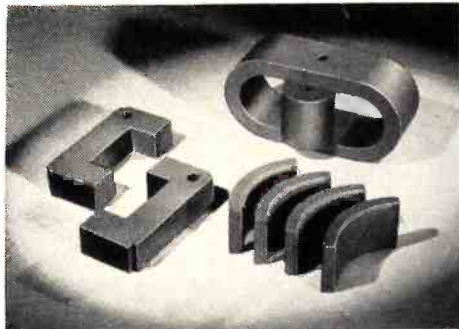
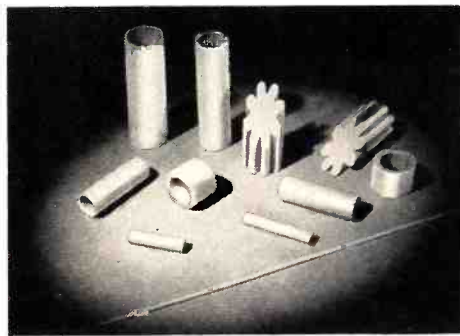
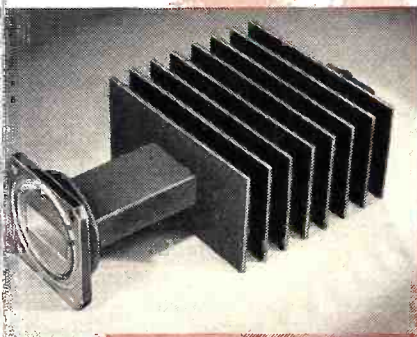
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Molded in widest variety of shapes and sizes; deflection yokes expand TV-tube deflection without corresponding voltage increase; slash TV transformer bulk.

CROWLEY MAGICORES . . .
Reduce cost and raise gain in slug tuners, R.F. and I.F. coils; fabricated in widest variety of shapes and sizes; meet critical characteristics, in radio, TV and electronic applications.

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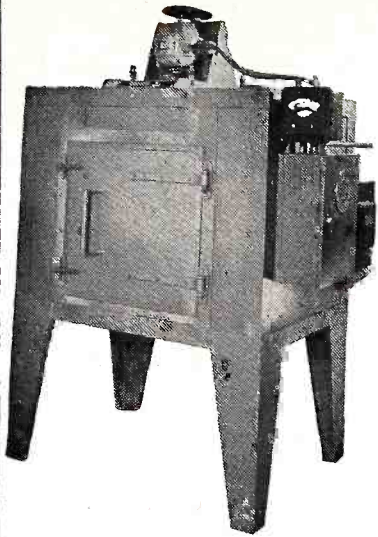
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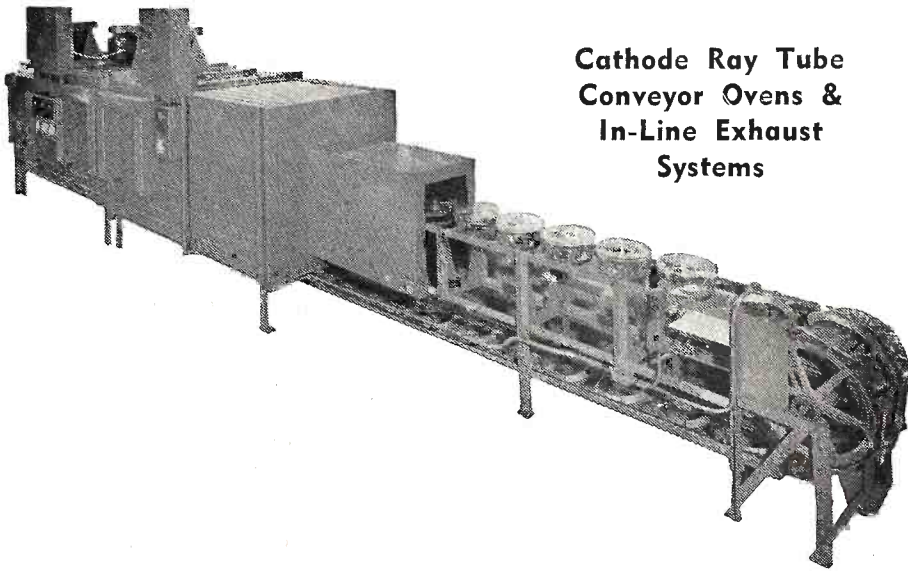
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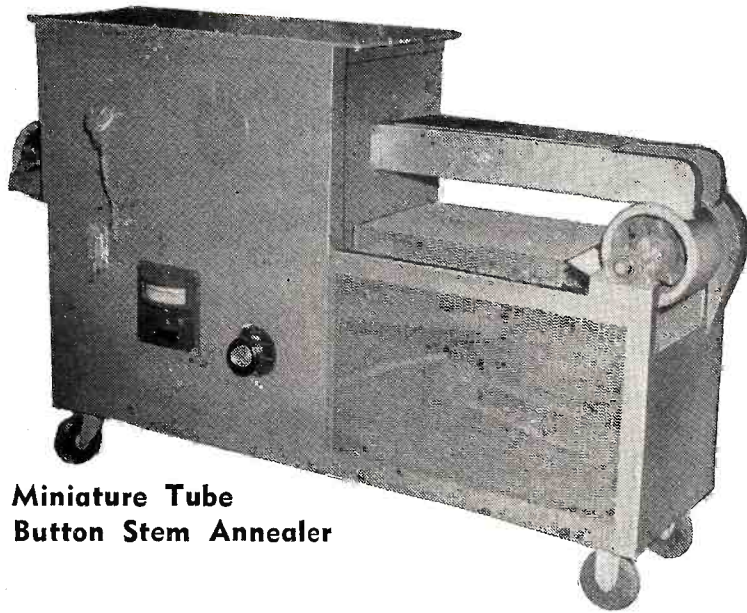


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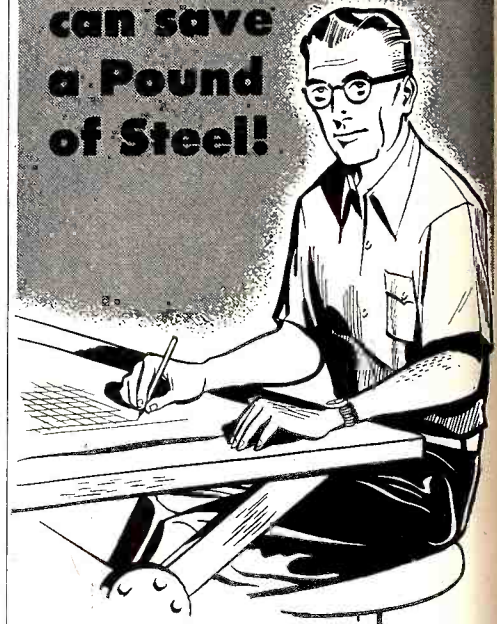


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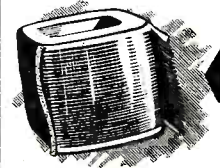
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Hartford City Paper Company has been manufacturing layer insulation for almost sixty years. Rapid strides have been made in improving the complete line of Electrical Glassine and Coil Kraft papers to meet the ever growing needs of the electronics industry.



We produce and stock Coil Kraft from .0006 inches to .005 inches thick in 3 densities.

SAMPLES, data sheets and price lists are available upon request. Before placing your next order, write and get the Hartford City Paper Company facts on how to get more efficient results from your layer insulation paper.

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Stycast Customized Casting Resins

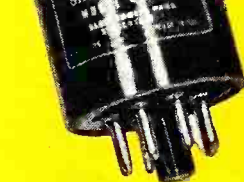
Electronic Embedment techniques, as you may have discovered, have distinct advantages—and hidden pitfalls. Emerson & Cuming know-how can show you how to build-in the specific qualities you need with one of its standard resins — or a plastic specially formulated for your particular use.

Stycast resins are simple to use. They are manufactured for but one purpose: To make superior electrical embedments.

Stycast 40 A clear, transparent, casting resin used for preliminary embedments of electronic circuits or components, and permanent castings where visual inspection is required. Temperature range: -10°C to $+150^{\circ}\text{C}$. *Coil assembly used in high speed photographic equipment operating at 22,000 volts.*



Stycast 1030 CM A tough, black, rubbery material with high impact strength for embedments used over a temperature range from -90°C . to $+170^{\circ}\text{C}$. *Monopole transformer at left sealed in Stycast 1030 CM.*



Stycast 4030 CM A black, opaque, quick-curing material, well adapted to production applications. Temperature range: -65°C . to $+200^{\circ}\text{C}$. *G-E Binary Scaler; entire circuit potted in Stycast 4030 CM for stabilization and hermetic sealing.*

Stycast 5050 CM Combines good low and high temperature characteristics with excellent adhesion and high insulation qualities. *Glass thermister sealed in aluminum housing to withstand underwater pressure of 300 psi.*



Stycast 35 Polystyrene casting resin with excellent electrical qualities. Dielectric constant 2.6; dissipation factor below 0.0009 from 60 to 10^{10} cycles. *Well adapted to this Waveguide Plug and to many RF applications.*



Stycast TP A material which combines excellent electrical and physical qualities over a wide temperature range: -65°C . to 135°C . Dielectric constant 2.6; dissipation factor below 0.002 from 60 to 10^{10} cycles.

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Length of Transmission Line	Total Loss	ERP*	Approximate Power Loss
1000 ft.	3 db	50 kw	50 kw
500 ft.	1.5 db	70.7 kw	29.3 kw
100 ft.	0.3 db	93.5 kw	6.5 kw

*Assuming 100 kw ERP with a perfect transmission line

Small increments of attenuation in coaxial transmission lines result in excessive power losses when used in conjunction with hi-gain antennas in the UHF range. This loss of effective radiated power is often as high as 50%.

The best solution to the problem is waveguide. Waveguide provides lower attenuation, greater coverage for equal antenna height . . . it can be used in combination with UHF coaxial line . . . requires no dehydration or pressurization.

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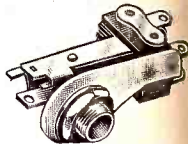
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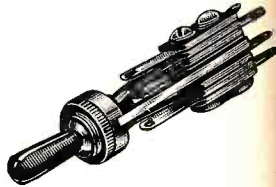
PLUGS



"Littel-Plugs" — "Standard Plugs" — "Flat-Plugs". Two and three conductor types, new and different designs. Plastic and metal shells. Also JAN types.

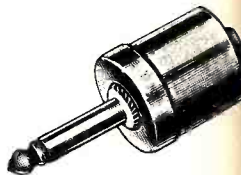
SWITCHES

PUSH BUTTON, ROTARY, LEVER ACTION "Littel-Switches" — "FF-Switches" — "RS-Switches" — "Lev-R-Switches" — "Telever Switches". Numerous designs, simple, yet rugged construction. All popular circuits.



ADAPTERS

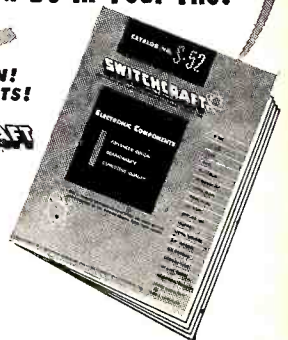
Seven different "Adapters" provide convenient interchange of equipment between various connector devices. No. 344 (Illustrated) Phone Jack Connector Input to Phone Plug Output (See Catalog for complete line).



- "PHONO" and "MICROPHONE" CONNECTORS
- CABLE ASSEMBLIES

This NEW
CATALOG
Should Be In Your File!

NEW DESIGN!
NEW PRODUCTS!
by
SWITCHCRAFT



Write today for your copy

SWITCHCRAFT
INC.

1320 N. Halsted St., Chicago 22, Ill.
Canadian Representative: Atlas Radio Corp., Ltd., 560 King St., W., Toronto 2B, Canada. Phone: Waverly 4761.

ROBINSON **MET-L-FLEX** all-metal mounts for vibration isolation and shock protection

FOR AIRBORNE ELECTRONIC EQUIPMENTS, INSTRUMENTS AND CONTROLS

SERIES 878 TWIN UNIT MOUNT ASSEMBLY

The assembly consists of two Series 7001 MET-L-FLEX Unit Mounts on a flanged tie-plate for attachment to your own tray or mounting base. S-1 and S-2 standard bases incorporate this assembly. Special widths and load ratings available. See Dwg. 878 B for details.

Robinson Model Number	Load Rating lbs. Each End
878-1	1/2 to 1
878-2	3/4 to 1 1/4
878-3	1 1/2 to 3
878-4	2 1/2 to 5 1/2
878-5	5 to 10

SERIES 892 UNIT MOUNTING BASE

Designed and manufactured in conformance with JAN-C-172A and included specifications. "Proof Tested" Construction. Uses two Series 878 MET-L-FLEX Twin Unit Mounts and Bonding Jumpers. See Dwg. 892 B for details.

Robinson Model No.	Standard Designation	Load Range in Pounds	Weight in Lbs.
892-1	MT-S-1	6-12	1.25
892-2	MT-S-2	10-22	1.35

SERIES 831 UNIT MOUNTING BASE

Designed and manufactured in conformance with JAN-C-172A and included specifications. "Proof Tested" Construction. Employs four Series 7002 MET-L-FLEX Unit Mounts and Bonding Jumpers. See Dwg. 831 B for details.

Robinson Model No.	Standard Designation	Load Range in Pounds	Wgt. in Pounds
831-1	MT-A1-B	10-24	2.40
831-2	MT-A1-C	10-24	2.45
831-3	MT-A1-D	10-24	2.50
831-4		18-40	
831-5		10-24	2.60
831-6	MT-B1-B	18-40	
831-7		10-24	2.65
831-8		18-40	
831-9	MT-B1(2)-D1	22-50	2.70
831-13	MT-B1(2)-D2	40-80	2.70
831-14	MT-C1(2)-C	40-80	2.80
831-15	MT-C1(2)-D	40-80	2.85

ROBINSON MET-L-FLEX Engineered Mount-Systems, Mounting Bases and Unit Mounts are compact, rugged and effective. They feature an exclusive all-metal resilient element, made of knitted stainless steel wire, fabricated and compressed. This cushion provides wide environmental tolerance with high built-in damping, resulting in "Sea level performance at any altitude". Its non-linear reaction characteristics permit optimum performance under load variations of as much as $\pm 50\%$ of mean ratings. Auxiliary MET-L-FLEX limiter pads afford additional protection against extreme overloads and impacts.

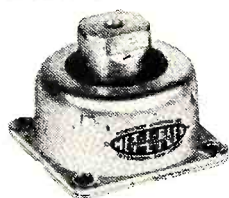
Further "Plus Features" exclusive with MET-L-FLEX Mounts and Mounting Bases are: negligible drift rate; wide temperature tolerance (-90°C to $+175^{\circ}\text{C}$); amazingly long service life without maintenance. They completely lack those faults and weaknesses inherent to mountings incorporating organic or plastic materials.

The "Plus Features" of Robinson Mountings, providing performance in excess of current specifications, pay off maximum protection of the mounted equipment.

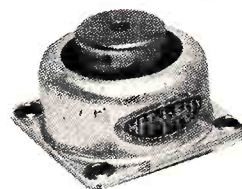
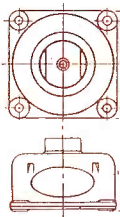
For complete performance and construction details, write for Technical Bulletins EB-700 and EB-750 and the telephone number of your local representative.

*MET-L-FLEX is the copyrighted designation for the all-metal resilient cushions developed and pioneered by Robinson.

Mounting Bases to meet your exact dimensional and load requirements are available on special order.



SERIES 7001



SERIES 7002

Model Number	Application Range in Lbs.
7001-H	1/2 to 1
7001-J	3/4 to 1 1/4
7001-K	1 1/2 to 3
7001-L	2 1/2 to 5 1/2
7001-M	5 to 10

Model Number	Application Range in Lbs.
7002-G	1 1/2 to 2 3/4
7002-H	2 1/2 to 6
7002-J	4 1/2 to 10
7002-K	5 1/2 to 12 1/2
7002-L	10 to 20
7002-U	15 to 30
7002-M	18 to 40
7002-P	35 to 50
7002-R	45 to 75

ROBINSON AVIATION INC.

TETERBORO, NEW JERSEY

Vibration Control Engineers

TURBO Products

**SPECIAL PURPOSE
INSULATED WIRE**

THE WILLIAM

BRAND

AND CO., INC., WILLIMANTIC, CONN.

MINIATURIZATION WIRE

Specially developed for use in electronic equipment within the range of -55°C to $+105^{\circ}\text{C}$, and maximum operating voltage of 600 volts rms. This wire is ideal for use in miniaturized equipment as both hook-up wire and lead wire for transformers, chokes and other components, where space is at a premium and operating temperatures are high. Available in both standard and flexible . . . in solid colors or candy striped with 1, 2 or 3 tracers.

The primary insulation is Turbo 540, an extruded polyvinyl chloride compound that is resistant to the effects of water, oils, aircraft engine fuels, hydraulic fluids, ethylene glycol, alcohol, dilute acids, alkalis and fungus. Over the primary insulation there is an extruded jacket of nylon to give added mechanical protection and abrasion resistance.



Brand Part No.	Approx. AWG	Stranding	Nom. Cir. Mil Area	Pri. Ins. Min. Wall	Nylon Min. Wall	Max. O.D.	Nom. lbs./M
MM300607N	30	7/38	110	0.006	0.002	0.035	0.8
MM270607N	27	7/35	221	0.006	0.002	0.040	1.1
MO2606N	26	Solid	254	0.006	0.002	0.040	1.6
MO2406N	24	Solid	404	0.006	0.002	0.048	2.0
MM240619N	24	19/36	475	0.006	0.002	0.048	2.2
MM240607N	24	7/32	442	0.006	0.002	0.048	2.1
MO2207N	22	Solid	642	0.007	0.003	0.058	2.9
MM220719N	22	19/34	754	0.007	0.003	0.058	3.3
MM220707N	22	7/30	707	0.007	0.003	0.058	3.2
MO2007N	20	Solid	1020	0.007	0.003	0.068	4.3
MM200719N	20	19/32	1200	0.007	0.003	0.068	5.0
MM200707N	20	7/28	1120	0.007	0.003	0.068	4.7
MO1807N	18	Solid	1620	0.007	0.003	0.079	6.5
MM180719N	18	19/30	1920	0.007	0.003	0.079	7.5
MM180707N	18	7/26	1780	0.007	0.003	0.079	7.1
MO1607N	16	Solid	2580	0.007	0.003	0.088	9.7
MM160719N	16	19/29	2410	0.007	0.003	0.088	9.4
MO1408N	14	Solid	4110	0.008	0.003	0.103	14.0
MM140819N	14	19/27	3840	0.008	0.003	0.103	14.5
MM120819N	12	19/25	6080	0.008	0.004	0.126	22.5

LOW TENSION AIRCRAFT WIRE & CABLE

The conductor consists of a stranded tinned copper wire. The primary insulation is an extruded polyvinyl chloride compound that is resistant to the effects of water, oils, aircraft engine fuels, hydraulic fluids, ethylene glycol, alcohol, dilute acids, alkalis and fungus. This wire has excellent electrical properties and has a

rated working voltage of 600 volts rms. This wire has an outer protective nylon jacket, with or without shield.

For general use. Low tension construction has excellent electrical and physical characteristics, light weight, and low space factor.

Made To MIL-W-5086 & MIL-C-7078 Specifications

BULLETIN A-4662 GIVES MORE INFORMATION ABOUT TURBO INSULATION. COPIES AVAILABLE ON REQUEST.

Brand Part No.		Type	Wire Size	Stranding	Nom. Ins. Thickness	Max. O.D. Mil-W-5086	Nom. Lbs./M ft. MIL-W-5086
No Shield MIL-W-5086	With Shield MIL-C-7078						
6622AN19N	6622AN19NS	AN-22	22	19/34	.015	.076	6.3
6620AN19N	6620AN19NS	AN-20	20	19/32	.015	.086	8.4
6618AN19N	6618AN19NS	AN-18	18	19/30	.015	.096	11.6
6616AN19N	6616AN19NS	AN-16	16	19/29	.015	.109	14.3
6614AN19N	6614AN19NS	AN-14	14	19/27	.015	.124	21.0
6612AN19N	6612AN19NS	AN-12	12	19/25	.015	.144	32.0



Products

**GENERAL PURPOSE
HOOK-UP WIRE**

THE WILLIAM

AND CO., INC., WILLIMANTIC, CONN.

HOOK-UP WIRE FOR RADIO & TELEVISION INDUSTRY

As noted, the
ing wires are ap-
d by Underwrit-
laboratories, Inc.,
peration at indi-
temperatures.
al strandings are
n. Others are
ble on special

Approx. AWG Size	Stranding	Min. Ave. Ins. Thickness	Nom. Plastic O.D.	80°C Brand Pt. No.	90°C Brand Pt. No.	105°C Brand Pt. No.
26	Solid	0.016	0.050	802616	902616*	502616***
26	10/36	0.016	0.052	88261610	99261610*	55261610***
24	Solid	0.016	0.054	802416	902416*	502416***
24	7/32	0.016	0.057	88241607	99241607*	55241607***
22	Solid	0.016	0.059	802216	902216*	502216***
22	7/30	0.016	0.065	88221607	99221607*	55221607***
20	Solid	0.016	0.067	802016	902016*	502016***
20	10/30	0.016	0.071	88201610	99201610*	55201610***
18	Solid	0.016	0.074	801816	901816*	501816***
18	16/30	0.016	0.080	88181616	99181616*	55181616***
16	Solid	0.016	0.086	801616	901616*	501616***
16	26/30	0.016	0.095	88161626	99161626*	55161626***
14	41/30	0.016	0.112	88141641**	99141641**	55141641**
26	Solid	0.031	0.080	802631	902631	502631
26	10/36	0.031	0.084	88263110	99263110	55263110
24	Solid	0.031	0.084	802431	902431	502431
24	7/32	0.031	0.088	88243107	99243107	55243107
22	Solid	0.031	0.089	802231	902231	502231
22	7/30	0.031	0.094	88223107	99223107	55223107
20	Solid	0.031	0.096	802031	902031	502031
20	10/30	0.031	0.102	88203110	99203110	55203110
18	Solid	0.031	0.104	801831	901831	501831
18	16/30	0.031	0.111	88183116	99183116	55183116
16	Solid	0.031	0.115	801631	901631	501631
16	26/30	0.031	0.126	88163126	99163126	55163126
14	Solid	0.031	0.129	801431	901431	501431
14	41/30	0.031	0.142	88143141	99143141	55143141
12	65/30	0.031	0.162	88123165	99123165	55123165

Underwriters' Ap-
proved only with
otton, rayon or
lass overbraided.
ee NOTE.
ot covered by Un-
erwriters' Stand-
ards.
Underwriters Ap-
proved only with
lass overbraided.
ee NOTE.

NOTE—All wire available with an overbraided. Add suffix to Part No. to indicate required overbraided

Overbraided	Suffix	Approximate O.D. Increase
Cotton	"C"	0.030
Rayon	"R"	0.015
Glass	"G"	0.015

OTHER FAMOUS TURBO INSULATING PRODUCTS

- 1. TURBOZONE—low temperature plastic tubing
- 2. TURBOLEX—General purpose plastic tubing
- 3. TURBO "PE"—High frequency plastic tubing
- 4. TURBOTHERM 105—High temperature (105°C) plastic tubing
- 5. TURBOTRANS 105—Special high temperature (105°C) plastic tubing
- 6. TURBOBRAID—Overbraided polyvinyl tubing
- 7. TURBOSIL—High temperature (200°C) silicone varnish impregnated glass-braid tubing

- 8. TURBO MARKERS—Long-life slip-on identification markers for electrical uses
- 9. TURBO INSULATED WIRES
- 10. TURBO WIRE MARKERS
- 11. TURBO EXTRUDED TUBING
- 12. TURBO GLASS SLEEVING AND TUBING
- 13. TURBO VARNISHED SATURATED SLEEVING & TUBING
- 14. TURBO CAMBRIC CLOTHS, TAPES, PAPERS
- 15. TURBO MICA

PHALO

Quality-Insured

**CABLES • WIRES • HARNESES
CORD SETS • FLEXIBLE TUBING**

PHALO *Tel* TELEVISION CABLES

PHALO *Tran* TRANSMISSION LINE CABLES

PHALO *X* CUSTOM-MADE CABLES

A few of many possible combinations of cables made to customers' specifications



Coaxial solid "Copperweld" conductor; low-loss polyethylene insulation; bare copper braid shield; vinyl plastic jacket RG-59/U type.

Coaxial Midget.



Solid bare copper conductor; low-loss polyethylene insulation; tinned copper braid shield; vinyl plastic jacket; RG-58/U type.



Coaxial-RG11/U Type Stranded tinned copper conductor. Low-loss polyethylene insulation. Bare copper braid shield. Vinyl jacket.



Conductors in air space low-loss polyethylene tubes. Copper shield over tubes. Vinyl jacket.



Two flexible stranded bare copper conductors, parallel twin-lead construction, low-loss, polyethylene insulation standard color brown. 300 ohm shown. Conductors: copper or copperweld. Can be supplied 75, 100 and 150 ohm.



Same, 300 ohm heavy-duty cable.



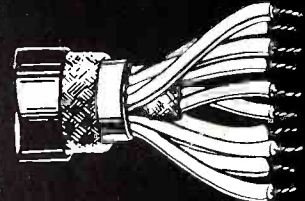
PHALOTUBE - 300 ohm Tubular Television Transmission Line Conductors: copper or copperweld



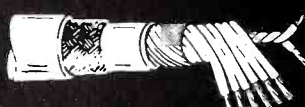
3 Conductor polyethylene
4 Conductor polyethylene
4 Conductor vinyl
5 Conductor vinyl



Four stranded tinned copper conductors, color-coded vinyl plastic insulation; one conductor has tinned copper shield and over-all vinyl plastic jacket; all four conductors cabled with jacketed conductor as core; cabled conductors covered with tinned copper shield, over-all vinyl plastic jacket.



Ten stranded tinned copper conductors, color-coded vinyl plastic insulation; two conductors twisted, covered with tinned copper shield; ten conductors cabled and filled, with shielded pair as core; cabled conductors covered with tinned copper shield, over-all vinyl plastic jacket.

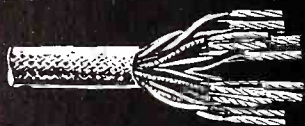


Eight stranded tinned copper conductors, color-coded vinyl plastic insulation; with twisted pair as core, eight conductors are cabled and served, with vinyl plastic jacket; tinned copper shield and over-all vinyl plastic jacket.

Two core conductors AWG 16, six AWG 22.

PHALO *Com*

INTERCOMMUNICATING & SPECIAL CABLES



Braided and jacketed cables for general intercommunicating and public address system use. Many variations, incorporating other wire sizes, insulation types and thicknesses. Can be manufactured to your individual specifications.



MICROPHONE CABLE



PHONOGRAPH PICK-UP ARM CABLE



PHOTOELECTRIC CELL CABLE



TWIN CABLE

PHALO *cord*

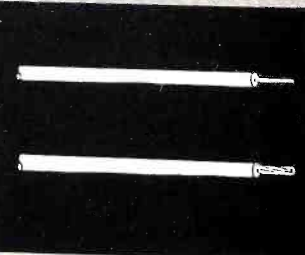
CORD, CORD SETS AND POWER SUPPLY CORDS

PHALO *N*

HOOK-UP, LEAD AND FIXTURE WIRES



Power supply cord SJT with M-32 plug, one end slit and stripped.



Available in a wide variety of insulation types and jacket constructions for many applications.



Complete, New Phalo Catalog - Yours on Request!

PHALO PLASTICS CORPORATION
GRAPHIC ARTS BUILDING, WORCESTER, MASSACHUSETTS

the

ONLY

recognized*

product

reference

book

of the

ELECTRONIC

INDUSTRY

the

electronics

BUYERS'

GUIDE

*By the
electronic
industry
itself...

COAXIAL SWITCHES and MICROWAVE TEST EQUIPMENT of advanced electronic design

General Communication Company, pioneers in the coaxial switch field, offers you a complete design, engineering and manufacturing service.

Not limited to the production of standard switches, General Communication Company is geared to help solve any coaxial switch problem you may have.

COAXIAL SWITCHES

Designed for compactness and light weight, with minimum V.S.W.R., insertion loss and crosstalk.

General Characteristics:

Frequency Range: 0 to 10,500 Mc.
V.S.W.R.: 1.2:1 maximum to 3000 Mc.
Insertion Loss: 0.3db maximum.
Crosstalk: Greater than 60 db at 3000 Mc.
Greater than 40 db at 10,500 Mc.
Operative Life: 10,000 cycles minimum.
Construction: Weatherproof.
Available with N, BNC, C, HN, BN or LN connectors.

REMOTE CONTROL, 28 VDC TYPES — Weight: 25 oz. (average). Size: 4 1/2" x 3" Diameter (average).

Radial connector configuration — Single circuit, 2 to 6 positions. Switching Time: 0.2 second (average). Switching Rate: 40 cpm (continuous).

Spring Return: Radial connector configuration. Single circuit, 2 positions. Switching Time: 20, milliseconds. Duty Cycle: on 30%, off 70% (min. "off", 1 sec.).

Transfer Switch — Parallel connector configuration. Double circuit, 2 positions. Switching Time: 0.1 second (average). Switching Rate: 40 cpm (continuous).

REMOTE CONTROL, 115 VAC TYPES

Spring Return — Parallel connector configuration. Single circuit, 2 positions. Optional manual control. Switching Time: 27 milliseconds. Switching Rate: 45 cpm. Weight: 3 1/2 lbs. Size: 5 5/8" x 6 1/4" x 4" overall.

and our latest model:

Radial connector configuration — Single circuit, 2 to 6 positions. Switching Time: 0.3 second (average). Switching Rate: 20 cpm (continuous). Weight: 24 to 28 oz. depending upon connectors. Size: 4 1/2" x 3" Diameter.

MANUAL CONTROL TYPES

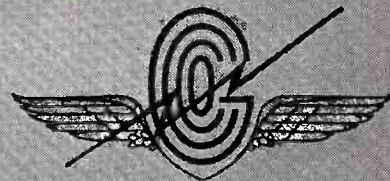
Radial connector configuration — Single circuit, 2 to 6 positions. Weight: 8 to 16 oz. (depending upon connectors). Size: 3 1/8" x 3" Diameter.

Parallel connector configuration — Single circuit, 2 to 6 positions. Weight: 21 to 25 oz. (depending upon connectors). Size: 4" x 3" Diameter.

X BAND TEST EQUIPMENT

Test sets BHX and CBX are portable microwave signal generators, designed for testing and adjusting beacon equipment and radar systems.

The frequency range of these test sets is 8500 mc to 9600 mc. They can measure external signals or supply a known output signal. Frequency is measured by a precision meter with calibrated dial. Power is measured by means of a calibrated RF attenuator and a thermister bridge type wattmeter.



GENERAL COMMUNICATION COMPANY
681 BEACON STREET, BOSTON 15, MASSACHUSETTS

**modern
as
tomorrow**

THE NEW TURNER ADA 95D

**THE FIRST SLENDER DYNAMIC
AT A POPULAR LOW PRICE . . .**

Sleek and slender as a modern space rocket . . . graceful lines artfully blended . . . high quality performance . . . new low cost . . . the most exciting advance in the microphone field . . . the new TURNER ADA 95D!

The excellent sound characteristics of this new jet-shaped dynamic make it ideal for high quality P.A. and recording work . . . its inconspicuous,

slim shape lets speakers be seen as well as heard.

Maximum sensitivity to voice and music with Alnico V magnets and moving coils; frequency response, 70 to 10,000 cps; output level, -58 db; standard 5/8"-27 coupler swings microphone in 60° arc; satin-chrome finish; 20 ft. removable cable set; choice of 50, 200, 500 ohms or high impedance.

Switch models also available.



attractively styled . . . permanently plated . . .

THE NEW TURNER 90 CARBON MOBILE MICROPHONE

Designed by Turner to add eye appeal to mobile applications. Choice of heavy duty push-to-talk switch, on-off relay circuit switch, or on-off microphone and external relay switch. Equipped with 2 or 4 conductor cable, reg-

ular or Koiled Kord (5 ft. extended). Choice of hook for hanging or bracket for wall or dashboard mounting. Frequency response, 200 to 4,000 cps; output level, -42 db; 200 ohms nominal DC resistance.



THE TURNER COMPANY

932 17th Street N.E., Cedar Rapids, Iowa

IN CANADA: Canadian Marconi Co.,
Toronto, Ont. and Branches

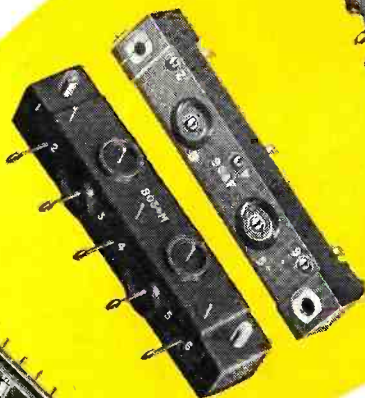
EXPORT: Ad. Auriema, Inc., 89 Broad Street,
New York 4, N. Y.



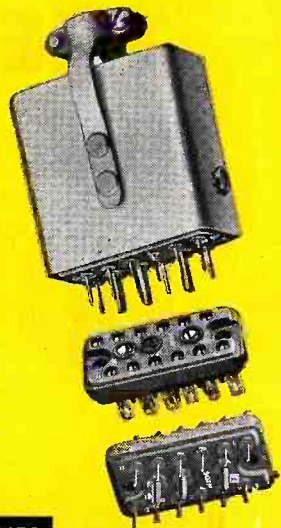
*The Helostama Temmincki

Proper Connections Are Important

PORTABLE EQUIPMENT
 INSTRUMENTATION
 COMMUNICATION
 TEST APPARATUS
 AIRCRAFT

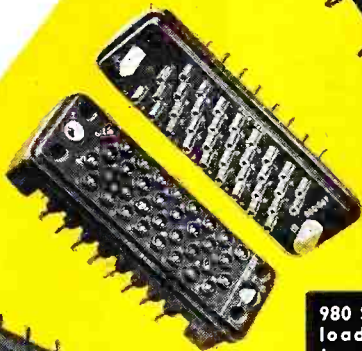


900-901 SERIES
 -available with
 various shaped
 terminations and
 contacts.



902 SERIES-avail-
 able in 15 contacts
 with various hood
 combinations and
 silver or gold plat-
 ing.

903 TYPE-for Hi-
 Voltage applica-
 tion.



980 SERIES-spring
 loaded connec-
 tors available
 with 12, 18, 24, 34
 contacts.



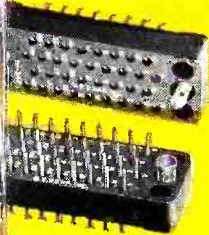
990 SERIES-avail-
 able with 7, 10, 15,
 18 contacts with
 brackets or hoods.

*The Helostama Temmincki, or Kissing Gourami has definitely made some sort of connection. This type of connection can only be determined by experts in the field of Ichthyology.

However, when dealing with connectors or connections for Electronic application, only an expert in that field can design and produce the proper connection for your specific need.

USC's complete engineering, tooling and production facilities are geared to produce quality connectors, allied components and assemblies.

Over 25 years experience is at your service



**MI (MINIATURE)
 SERIES** - available
 with 7, 14, 18, 20,
 21, 34 contacts.



**MH (MINIATURE
 HEX) SERIES** -
 available with 5, 7,
 9 contacts.



Pressure Seals
 to 1000 P.S.I.



Adapter Assemblies



Cable Clamps
 withstanding 100 P.S.I.
 in cable sizes 3/16 to 21/32

Assemblies custom engineered and produced to your exacting requirements.

U. S. COMPONENTS, Inc.

Associated with U. S. Tool and Mfg. Co., Inc.

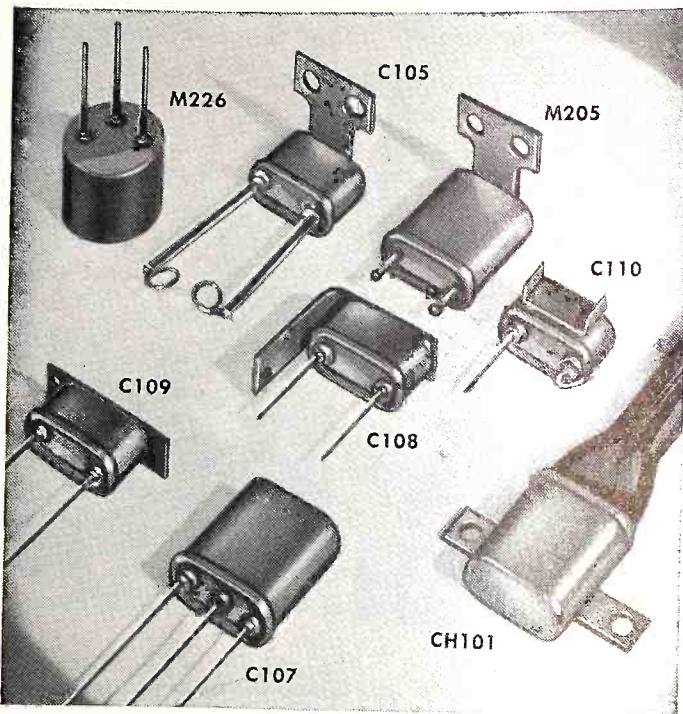
454-462 East 148th Street, New York 55, N. Y. CYPRESS 2-6525-6



STEVENS*

hermetically sealed

THERMOSTATS



Bright plated or dull black finish. Terminals to customer specification. Thermostats shown approximately 3/4 size.

Stevens Hermetically Sealed Thermostats—specially engineered for precision control of devices or equipment subjected to dust, moisture or corrosive atmospheres—are tightly, permanently sealed in corrosion-resistant metal cans. Some models have neoprene covered terminals. Virtually any type mounting bracket available.

Stevens Hermetically Sealed Thermostats are available in two basic styles: Type M bimetal disc for high-current circuits; Type C bimetal strip for low-current circuits, or for use in conjunction with disc types. Both models feature a bimetal thermal element that eliminates artificial cycling or life-shortening "jitters."

If your problem involves fast, accurate control of temperature under rugged atmospheric conditions, specify Stevens Hermetically Sealed Thermostats—they add to the life and sales of your product.

*Stevens also makes a complete line of standard bimetal disc and strip thermostats. Write for data.

Type M thermostat patented; Type C, patent applied for

A-4659

STEVENS

manufacturing company, inc.
MANSFIELD, OHIO

TIMER, electronic

Provides split-second timing with no-filament tube.



Compact, electronic timer eliminates need for frequent replacement of tubes. Timer uses type 5823 cold-cathode tube; there is no wear on tube during stand-by, and timing is instant and accurate without warm-up. No recharging time required, so immediate re-cycling is possible.

Ideal for short intervals. 0.03 to 24 seconds.

Easy time adjustment. Small time intervals can be spread over 320° dial.

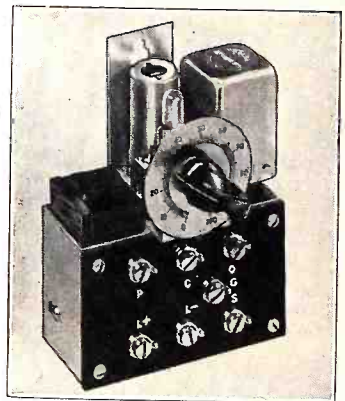
Four time ranges. Can be furnished with full-scale range of 1.5, 3, 6, 12 or 24 seconds.

Eight-ampere contacts. Single-pole, normally open contacts close at start of time cycle; SPDT contacts operate at end of cycle. All contacts independent of timing circuit.

Small size. 3 7/8 x 4 3/4 x 2 inches.

RELAY, electronic

operated by high-speed, low-energy pulses



Type CK electronic relay picks up impulses too small to operate mechanical relay and holds circuit closed long enough for heavy mechanical equipment to be actuated by impulse.

Fast response. Relay operates on contact of less than 0.5 millisecond.

High sensitivity. Above response speed obtainable even thru contact resistance as high as 500,000 ohms.

Adjustable actuating time. Relay operates in 10 milliseconds after impulse and stays "on" for time adjustable between 0.25 and 1.5 seconds.

Isolated switch circuit. Isolation transformer allows initiating contacts to be independent of line.

Long life. Cold-cathode tube energized only when pulse is received.

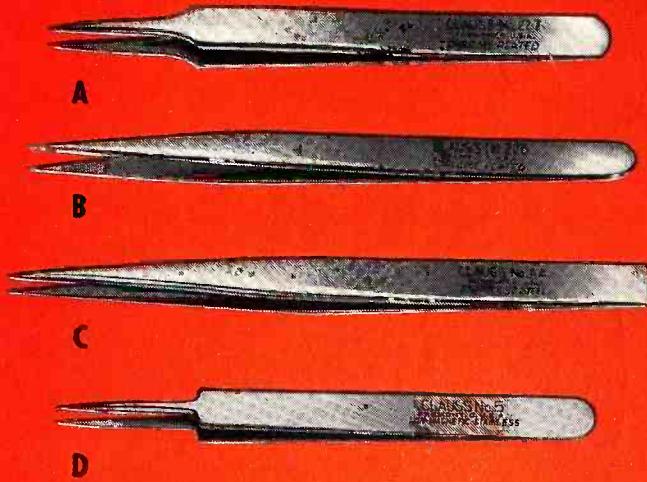
Easy maintenance. Plug-in relay good for millions of operations, and neon glowlamp lasting thousands of hours, are easily replaced.

Small size. Only 3 7/8 x 4 3/4 x 3 inches.

Farmer
ELECTRIC COMPANY
WABAN, MASSACHUSETTS

CLAUSS FINE WIRE SCISSORS

Points small for close-cutting—available with one blade saw-toothed for angle cuts to point wire, helpful in some resistor manufacturing—or with both blades plain for straight cutting.



CLAUSS FILAMENT SNIPS

Tremendous leverage for a small tool—blades small enough for close tolerances, handles designed to keep nails from digging into palms when in use.

CLAUSS NON-MAGNETIZABLE RUSTLESS TWEEZERS

- A { #227—Magnetizable chrome-plated surgical steel, plain points, length 4¼ inches.
- # 55—Non-magnetizable stainless steel plain points, length 4¼ inches.
- B { #226—Magnetizable chrome-plated surgical steel, serrated points, length 4¾ inches.
- #230—Non-magnetizable bronze, serrated points length 4¾ inches.
- #231—Non-magnetizable stainless steel, serrated points, length 4¾ inches.
- C { #AA—Magnetizable stainless steel, plain points, length 4⅞ inches.
- D { # 5—Non-magnetizable stainless steel, needle-points length 4¼ inches.

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BY THE MAN ON THE JOB

PRECISION TOOLS

FOR PERFECT PERFORMANCE FASTER

These tools were developed by the workers themselves—the women and men on the job—the result of close collaboration with our own engineers.

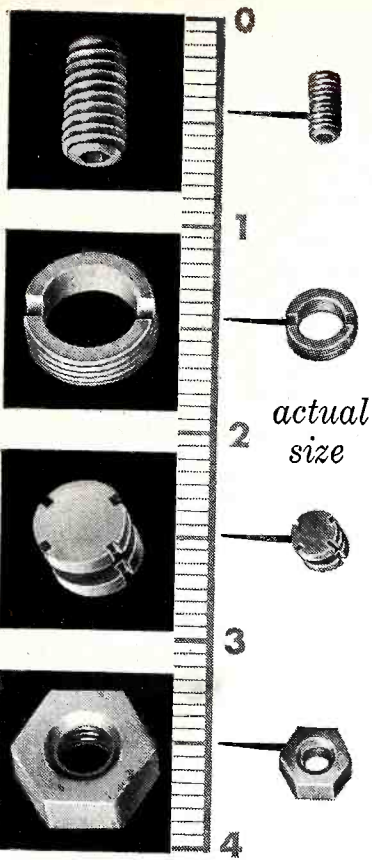
Consult Clauss on your requirements, a supplier of dependable tools to all types of industry.

Contact Your Industrial Supplier

*or Write or Wire
for information*

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NEW YORK OFFICE 1107 BROADWAY



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CORES



PYROFERRIC IRON CORES are scientifically manufactured, under strictest quality controls to close electrical and mechanical tolerances.

PYROFERRIC services are available for the engineering of your core production requirements . . . your letterhead request will bring you M.P.A. Data Sheets and tables which give complete information including recommended sizes and tolerances, as well as a cross-referenced index of manufacturers' material designation.



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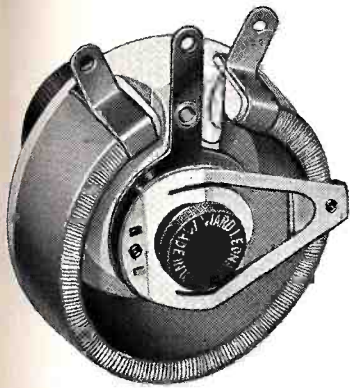
PYROFERRIC BLDG.

BRONX BOULEVARD
 at 216th St., N.Y.C. 67

Ward Leonard Electric Controls

Result-Engineered for Superior Performance

RHEOSTATS Ring Type



New Bulletin 1110 VITROHM Ring Type Rheostats assure the utmost in dependability, accuracy, and long service life, in both fixed and variable current control applications.

Newly designed for use in electronic, industrial, and other equipment where smooth, gradual resistance change is essential.

Core and base, molded of finest ceramic materials, are bonded together by VITROHM enamel. Special alloy resistance wire toroidally wound on core and held permanently secure by enamel. Design of drive shaft and contact arm eliminates backlash, assuring uniform contact pressure and smooth operation.

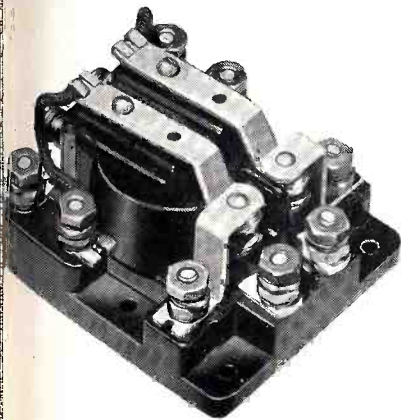
Ratings

25 watt rings from 1 to 2500 ohms 50 watt rings from 1 to 7500 ohms
Based on 300° C rise in 40° C ambient in accordance with NEMA and U.L. Inc. standards

Standard Resistance Tolerance
+20, -10 percent

Write for VITROHM Rheostat Bulletin 1110.

RELAYS



Ward Leonard makes an extensive line of a.c. and d.c. magnetic relays for automatic control, including heavy duty, intermediate, midget, timing and sensitive types.

All Ward Leonard relays are service-tested and proved under the most critical operating conditions. They are extra rugged to insure positive action and to prevent dislodging of parts by electrical or mechanical shock. They are built on molded Bakelite or metal bases with all essential parts locked in position by the most practical, effective method.

Every part meets exacting specifications

to assure proper action of the magnetic circuit and effective transfer of electrical energy to the circuits which the relay controls. Contacts are capable of handling their load with ample provision for overload. All parts are insulated for protection against high voltage. Metal parts are of corrosion-resisting material or plated for protection against corrosion.

Ease of installation and service are carefully considered in each design. At the same time, compactness is achieved throughout in keeping with electrical and mechanical requirements.

Write for Ward Leonard Relay Catalog.

RESISTORS



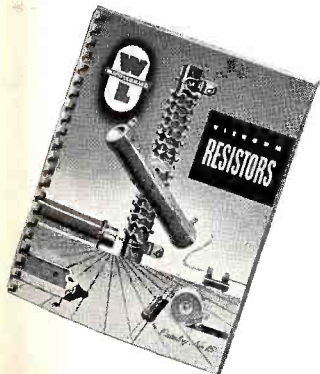
To meet industries' latest demands for VITROHM resistors, new styles, types and sizes are constantly added to Ward Leonard's already broad resistor line. Complete, up-to-the-minute information on stock and made-to-order VITROHM resistors is now available in Ward Leonard's new VITROHM Resistors Catalog No. 15.

All components of every VITROHM resistor are made by Ward Leonard, the only manufacturer who makes, not just assembles, all parts.

Vitreous enamel coating and ceramic cores are formulated and made by Ward Leonard, wire is drawn to their specifications. This means that all parts are uniform in quality, balanced in respect to thermal coefficient of expansion.

The "result-engineered" features of Ward Leonard VITROHM resistors have made them universally accepted as a measure of quality by designers, engineers, manufacturers, and scientists.

Write on your business letterhead for new VITROHM Resistors Catalog No. 15.



WARD LEONARD ELECTRIC COMPANY

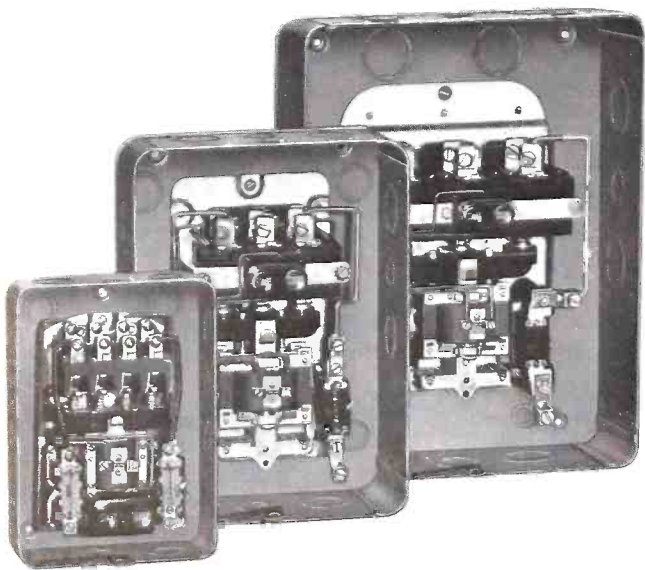
23 SOUTH STREET, MOUNT VERNON, N. Y.

Result-Engineered Controls Since 1892

RESISTORS • RHEOSTATS • RELAYS • ELECTRIC CONTROLS • CHROMASTER



MOTOR CONTROLS



Full line of a-c and d-c Ward Leonard motor starters and controllers, magnetic contactors and control accessories.

Write for Ward Leonard Motor Control Catalog.

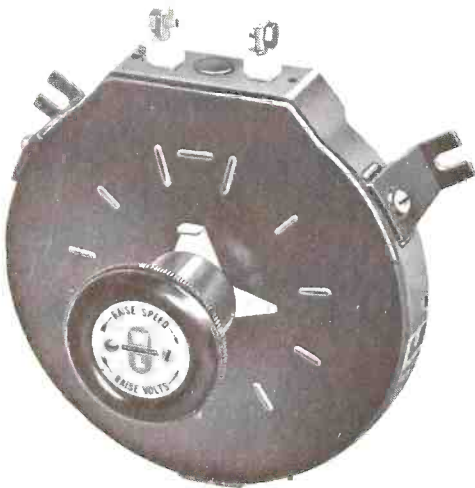
DIMMERS



Resistance, auto-transformer and reactance type dimmers for theatre, auditorium, studio lighting control.

Write for Ward Leonard Dimmer Bulletins 71-7

RHEOSTATS—Plate Type



Complete line of Ward Leonard VITROHM pressed steel plate type rheostats meets every requirement.

Ward Leonard field rheostats are offered in several multiples of field resistance values to meet various operating conditions. They are designed for a straight line relation between the steps of the rheostat and the field current.

VITROHM rectangular contact rheostats have been developed where a finer degree of control in electrically operated equipment is necessary.

Write for Ward Leonard Rheostat Bulletin 60a.

CHROMASTER



CHROMASTER is the new, simplified industrial chrome plating process for increasing life of cutting tools and wear parts three to ten times.

CHROMASTER plating units with built-in power supply are available in 20, 50, 250 amp and larger sizes. Chromasol, an economical, non-critical chrome solution, plates directly on industrial steels, cast iron, and most ferrous metals.

Write Ward Leonard for complete CHROMASTER details.

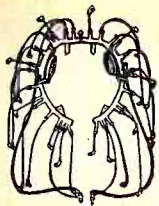


WARD LEONARD ELECTRIC COMPANY

23 SOUTH STREET
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Result-Engineered Controls Since 1892

RESISTORS • RHEOSTATS • RELAYS • ELECTRIC CONTROLS • CHROMASTER



IGNITION SHIELDING

Complete harness assemblies with detachable unit leads or rewirable leads. Igniter or ignition lead assemblies for jet and reciprocating aircraft engines and military vehicles.



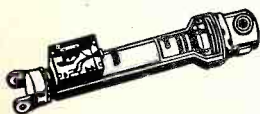
FLEXIBLE METAL TUBING

For electrical shielding, mechanical protection, fluid lines, conduits and ducts, pressure lines, and high and low temperature applications. Material, shapes and sizes to specification.



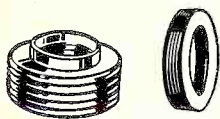
"AERO-SEAL" HOSE CLAMPS

Precision worm drive — for aircraft, automotive, marine, special-purpose and industrial use. Vibration-proof — will not work loose. Corrosion-resistant steel.



ACTUATING SYSTEMS

Electrical, mechanical, and hydraulic actuators for aircraft controls, valve closures, landing gear, or virtually any other type of equipment to manufacturer's specifications.



WELDED DIAPHRAGM BELLOWS

"Job engineered" to meet your requirements and make possible the use of bellows in applications where they could not previously be considered.



SPECIALIZED CONNECTORS

For electronic, aircraft, ordnance and communications equipment. Water-tight or pressure sealed types, panel types, quick disconnects, or other types for your new and special applications.

Over A Quarter Century of Design Experience backs



products

You benefit from 26 years of engineering design and manufacturing experience when you call on Breeze for precision production. Breeze offers an extensive line of quality products for aviation, communications, automotive and general industry. In addition, Breeze offers complete engineering services for the design and development of specialized electrical and mechanical devices.

Breeze products meet the latest government specifications.

BREEZE

CORPORATIONS, INC.

41 South Sixth St., Newark 7, N. J.



SPRINGS, WIRE FORMS, STAMPINGS

of ferrous and non-ferrous metals.

HELICAL SPRINGS

All types — compression, extension, torsion; with ends open, closed, ground, necked-down, or looped; to standard tolerances or special load tests.

WIRE FORMS

RF coils, chokes, antenna coils, vacuum-tube parts. A vast collection of multi-purpose jigs enables us to make all kinds of wire forms.

MULTIPLE-SLIDE STAMPINGS

High-speed production, with low-cost tooling, is made possible thru the use of a full line of automatic, four-slide machines and power presses.

SPECIALIZING IN BERYLLIUM COPPER

SPRINGS IN STRIP FORM

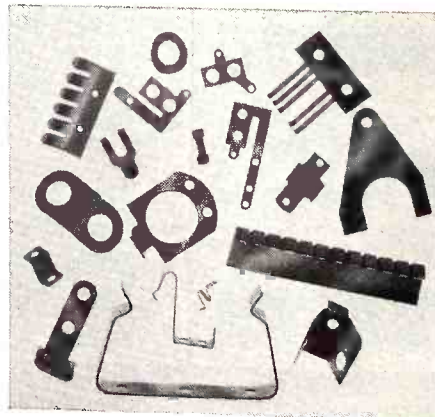
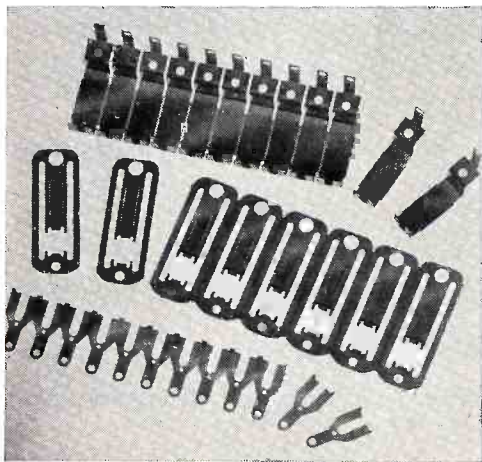
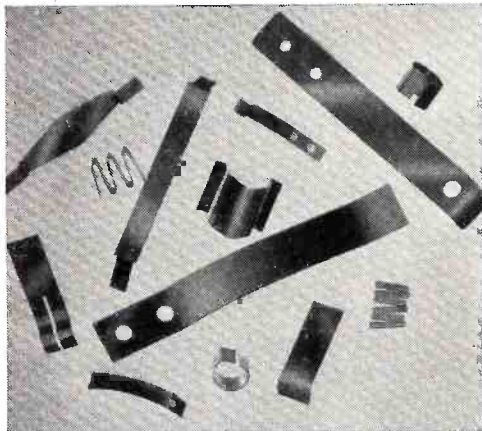
You can cut handling costs and speed automatic assemblies with strips of semi-attached springs fixture heat-treated for uniformity and close dimensional tolerance — at low cost.

ADVANTAGES

When you need unusual precision of shape, extreme freedom from drift, consistent uniformity of pressure, accurate calibration, long endurance, or other features peculiar to your service, you can save time and money by calling on LEE experience in beryllium copper.

SHORT-RUN SERVICE

For pilot runs, experimental parts, and low-production orders, you get quick delivery at reasonable cost from our special short-run service, on both helical springs and stampings.

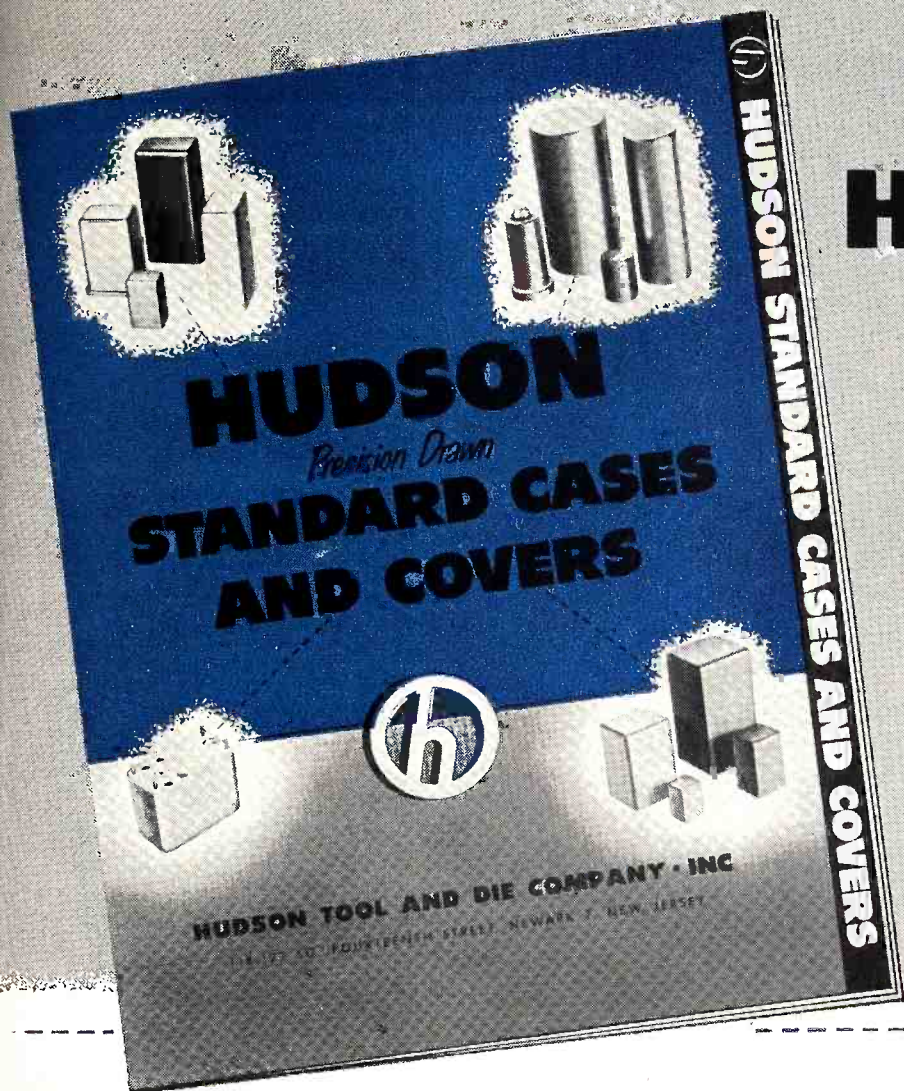


LEE SPRING COMPANY, inc.
Tel. ULster 5-7163 32 Main Street, Brooklyn 1, N. Y.

Design Help . . . Let us help you at the design stage to fit your spring into the most economical production category. Engineering assistance and stock for samples are available. Request your copy of Bulletin 53 "Design Facts".

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When **SPECIFICATIONS** call for
STANDARD CASES & COVERS



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The new Hudson Handbook contains full engineering data and specifications on hundreds of standard cases and covers. All are craftsmen-made to provide a quick, economical solution to component problems. Keep a copy of the Handbook on file in your engineering and purchasing departments. Request yours now!

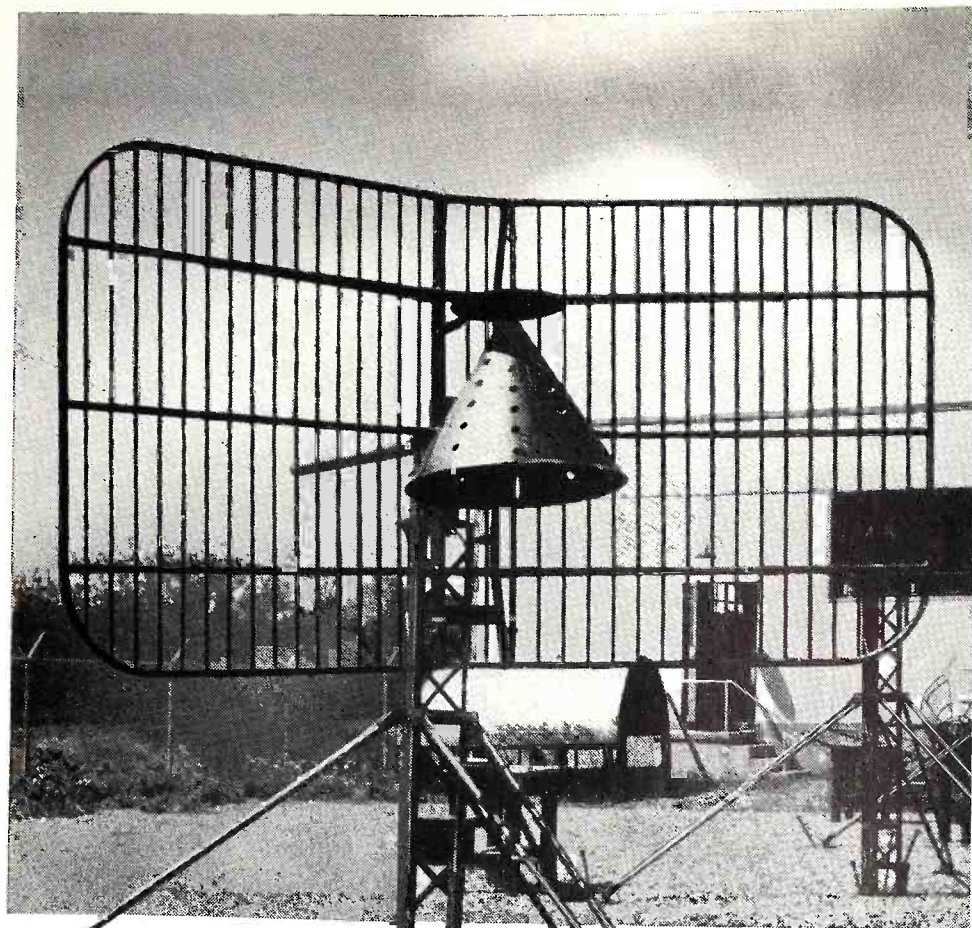
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All drawn cases and covers in the new Hudson Data File are standard and orders are filled promptly from regular factory stocks. Quality metal stampings are precision made to your exact specifications. For complete information on standard components, consult the Hudson Data File—for specification metal stampings, call or write Hudson for prompt service! Address inquiries to Desk 210.



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118-122 SO. FOURTEENTH STREET, NEWARK 7, NEW JERSEY



ANTENNA

Specialists

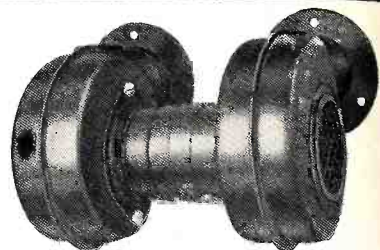
Technical Appliance Corporation designs, engineers and manufactures just one thing — the finest antennas and associated systems. This *SPECIALIZATION* has resulted in undisputed leadership in the fields of radio, television, radar, and aircraft-type antennas.

Technical Appliance Corporation offers unexcelled engineering facilities both in personnel and equipment, along with ingenious mechanical and production staffs. Whether your needs are for civilian or military type antennas—just let us know your requirements. Taco will transform your requirements into real production to fill all your antenna needs.

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SHERBURNE, N. Y.

HEINZE BLOWERS

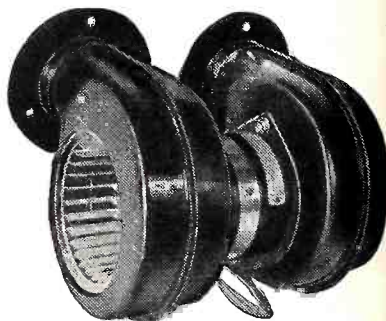


TYPE DD

Double blowers for applications requiring 100 CFM of air. Powered by Type D shaded pole induction motor. Requires infrequent oiling. Non-radio interfering. For 115 volts, AC, 60 cycles. 35 watts. 3150 RPM (free air). Other voltages and frequencies on request.

TYPE DS

Single blower, with all the advantages of Type DD, but approximately half the air delivery. 115 volts, AC, 60 cycles. For CW and CCW operation. 35 watts. 3100 RPM (free air). Other voltages and frequencies on request.



TYPES ZSD AND ZRD

Quiet, dependable units, delivering 100 CFM. 4 pole motor and large balanced air rotor. ZRD has absolute minimum of vibration. 115 volts, AC, 60 cycles. 1650 RPM (free air) 45 watts. Available for 230 volts or 50 cycle operation.



TYPES ZSS and ZRS

Most compact 50 CFM blowers available. Sturdy low speed Z shaped pole induction motor, 3/8" balanced air rotor. 115 volts, AC, 60 cycles. 1650 RPM (free air) 40 watts. Can be supplied for 230 volt operation. Various mountings.



TYPE F

For cooling electronic tubes in transmitters, induction heaters and diathermy equipment. 115 volts, AC, 60 cycles. 3000 RPM (free air). F2S, single blower, 10 CFM. F2D, double blower, 20 CFM.

SUB-FRACTIONAL HORSE POWER MOTORS

10 standard types. Special blowers or motors made to your specifications.

Heinze Electric Co
85 Lawrence Street
LOWELL, MASS

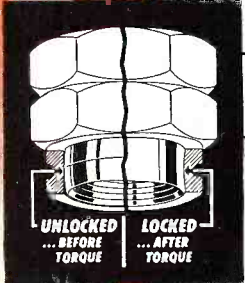
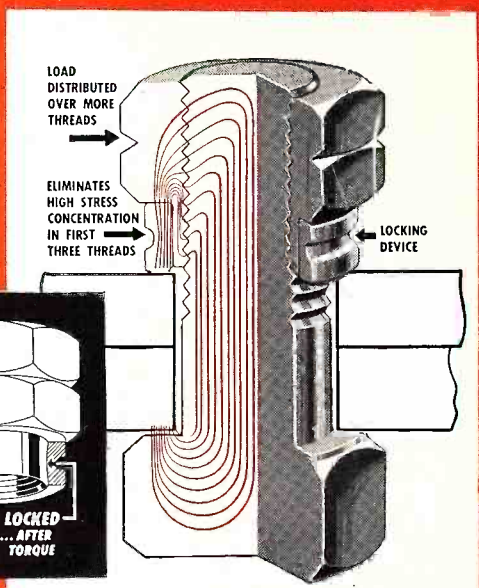
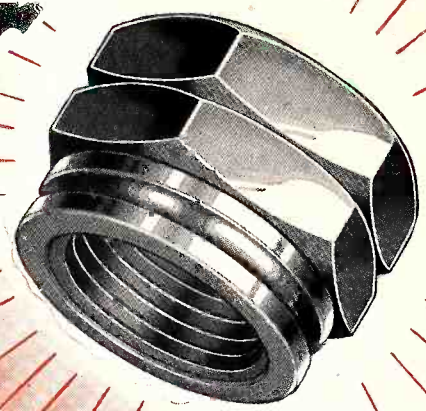
ELECTRONICS ENGINEERS WHO KNOW ARE SPECIFYING

Klincher LOCKNUT

for
High Temperature
Fastening up to

1600°

... particularly where
high frequency vibration,
tensile strength and re-usability
are factors!



Reasons are many why Klincher is getting first call on more and more of the really tough fastening jobs in the Electronics industry. For instance, on critically vital thermocouples Klincher Locknut permits use of desired torques without causing stud failure or unnecessary wear of stud threads.

In rectifiers, too; in chassis connections and terminal posts ... wherever bolts, studs or axle shafts must be preserved, Klincher Locknuts excel.

Inquiries invited regarding specialized Locknut problems. Write for data and experimental samples, giving size and application. Address Dept. E-6-3

KLINCHER ADVANTAGES:

- Easy to inspect for positive assurance of tight connection.
- Free running feature reduces assembly time.
- Only one piece to stock and handle.
- Ideal for hand and power wrenches.
- Manufactured in stainless and other materials, in machine screw sizes No. 4 and up, and all fractional sizes.

Klincher
LOCKNUT CORPORATION
2153 HILLSIDE AVE.
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FREE RUNNING



SHANK NUT



PREVAILING TORQUE



WELD OR RIVET
Free Running



GANG CHANNEL
Free Running

National Fine and National Course Threads



Magnavox

Electrolytic Capacitors

MADE EXPRESSLY FOR THE MANUFACTURING TRADE SINCE 1919



1 1/2" diameter FP available in 2, 2 1/2, 3 and 4" lengths



1" diameter FP available in 2, 2 1/2 and 3" lengths

• Magnavox products are world-renowned for their quality performance, long life, economy, dependability, uniformity and precision construction.

The table below shows a few of the standard type FP Capacitors. Manufacturer's specification requirements are given immediate attention.

TYPE FP—(As Illustrated)			
CATALOGUE No.	CAPACITY MFD.	WORKING VOLTS	SIZE
850115	10	350	1 x 2
850081	20	450	1 x 2
850109	30	500	1 x 3
850059	40	500	1 x 3
850097	50	350	1 x 3
850104	30	500	1 3/8 x 2
850070	50	450	1 3/8 x 2
850034	10-10	450-450	1 x 2
850071	15-15	450-450	1 x 3
850007	20-20	450-450	1 x 3
850052	30-10	475-475	1 x 3
850137	40-40	450-450	1 3/8 x 3
850041	50-50	400-400	1 3/8 x 3
850135	10-10-10	475-475-475	1 x 3
850008	50-50-50	150-150-150	1 x 3
850102	30-30-10	450-450-450	1 3/8 x 3
850050	40-30-30	450-450-450	1 3/8 x 3
850027	15-15-10-10	450-450-450-450	1 3/8 x 2
850108	20-20-10-10	450-450-450-450	1 3/8 x 3

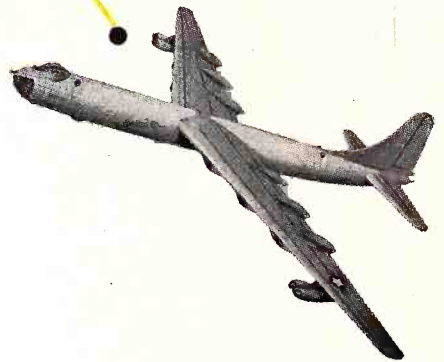
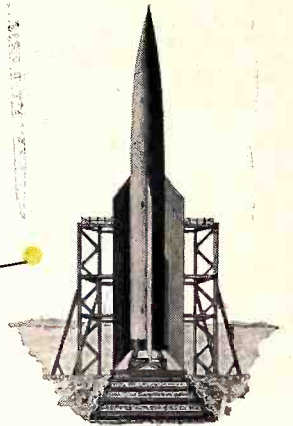
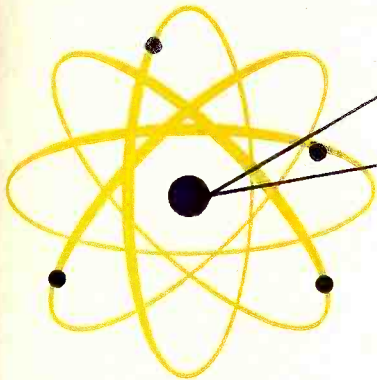
ALSO AVAILABLE—Type "TM" (tubular metal) in single and dual capacities, diameter sizes 5/8", 3/4", 7/8" and 1".

★ Detailed catalogue available upon request.

THE MAGNAVOX COMPANY

Dept. E

FORT WAYNE 4, INDIANA



diversified experience in electronics

● Contracts with U. S. and foreign governments for electronic work are nothing new at Air Associates! For many years, our Electronic Division has been developing and manufacturing LF, VHF and UHF communication and navigation systems, landing systems, firing error indicator systems, echo ranging systems (including sonar) and special miniaturized electronic devices. Our wide experience and expanded facilities for airborne, marine and ground electronics equipment are available to help solve your design and production problems. Your inquiry to Teterboro will receive prompt attention. *Air Associates, Incorporated, Teterboro, New Jersey.*

Manufacturers and Distributors of Aviation Supplies and Equipment



AIR
ASSOCIATES, INC.

PRECISION RESISTORS

ACCURATE, FIXED, WIRE-WOUND

Shown below are a few of the many standard types available. Special types to suit specific requirements can be quickly developed to your own specs regardless of Ohmic value.



AXIAL WIRE TERMINALS



TYPES	TX SERIES (Sub-miniatures)	WX-A	WZ-A
WATTAGE RATING	1/10w to 3w	1/4 w	1/2 w
BODY DIAM.	.107" to .375"	3/8"	3/8"
BODY LENGTH	5/16" to 1 1/2"	5/8"	1 1/16"
RES. RANGE	0.25 OHM to 50K	5 OHMS to 250K	10 OHMS to 500K
% TOL.	± 5% to ± 1/4 %	± 5% to ± 1/20 %	

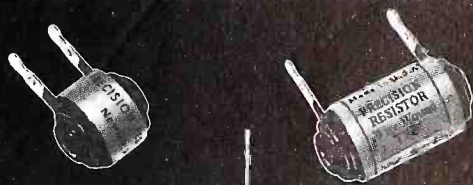
RADIAL WIRE TERMINALS



TYPES	PM-2 (Sub-miniatures)	RW	SW
WATTAGE RATING	1/10w	1/2 w	1w
BODY DIAM.	1/4"	1/2"	1/2"
BODY LENGTH	5/16"	1/2"	1"
RES. RANGE	10 OHMS to 300K	5 OHMS to 500K	10 OHMS to 1 M
% TOL.	± 5% to ± 1/20 %		

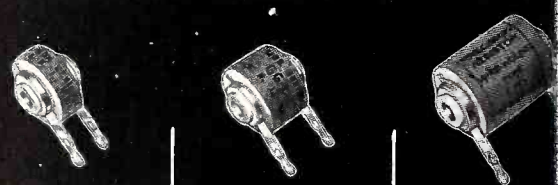


RADIAL SOLDER LUG TERMINALS



TYPES	WR-L	WS-L
WATTAGE RATING	1/2 w	1w
BODY DIAM.	1/2"	1/2"
BODY LENGTH	9/16"	1"
RES. RANGE	0.05 OHM to 500K	0.1 OHM to 1 MEG.
% TOL.	± 5% to ± 1/20 %	

MILITARY (JAN-R-93) TYPES



TYPES	RG-L (RB-10)	GG-L (RB-11)	FW-L (RB-12)
WATTAGE RATING	1/4 w	1/3 w	1/2 w
BODY DIAM.	5/8"	5/8"	5/8"
BODY LENGTH	15/32"	5/8"	1"
RES. RANGE	Designed and produced in strict accordance with JAN-R-93 (MIL R-93) specifications for military application under contractual approval.		
% TOL.	Designed and produced in strict accordance with JAN-R-93 (MIL R-93) specifications for military application under contractual approval.		

WRITE FOR COMPLETE CATALOG AND DETAILED INFORMATION

TEMPERATURE STABILITY: TEMPERATURE COEFFICIENT (T.C.) OF RESISTIVE ELEMENTS

For Resistance Values in OHMS, any style resistor	Change in Resistance %/°C p.p.m./°C	Over a Temperature Range	General Classification	Application for Resistor	Wire Alloy Specifications
1000 OHMS or less	± 0.0015% 15 ± 0.002% 20	+15°c to +35°c -60°c to +100°c	Zero T.C. High Stability	Std. Commercial Special Req.	Manganin Evanohm/Karma
Above 1000 OHMS	+0.017% 170 ± 0.002% 20	-40°c to +80°c -60°c to +100°c	General Purpose High Stability	Std. Commercial Spec. Req. (Mil.)	Tophet C/Nichrome Evanohm/Karma

USEFUL ENGINEERING DATA FOR ALL ACCURATE, WIRE-WOUND, PRECISION RESISTORS

OUR NEW PLANT IN HILLSIDE, N. J.



PRECISION RESISTOR CO., Inc.

109 - 111 U.S. Highway 22 HILLSIDE, N. J. Phone: Bigelow 3-3809



"EVEREADY" BRAND RADIO BATTERIES

TYPES	VOLTAGE	LENGTH	WIDTH	HEIGHT	TERMINALS	SUGGESTED CURRENT RANGE	WEIGHT BATTERY
"A-B" PACK FOR HOME RECEIVERS							
776	7.5, 9.0 A	7 $\frac{3}{8}$ "	4 $\frac{1}{8}$ "	9 $\frac{7}{8}$ "	Socket —, +7.5, +9	A: 50 m.a.	14 lb. 12 oz.
	90 "B"				Socket —, +90		
					Recessed Plug —, +9	B: 5.0-12.0 m.a.	
					Recessed Plug —, +90		
"A-B" PACKS FOR PORTABLE RECEIVERS							
752	9 A	14 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "	4 $\frac{1}{8}$ "	Recessed Plug —, +9	A: 50 m.a.	6 lb. 2 oz.
	90 B				Recessed Plug —, +90	B: 5.0-15.0 m.a.	
753	7.5 & 9 A	9 $\frac{7}{8}$ "	2 $\frac{3}{8}$ "	4 $\frac{1}{8}$ "	Socket —, +7.5 & 9	A: 50 m.a.	4 lb. 12 oz.
	90 B				Socket —, +90	B: 5.0-12.0 m.a.	
754	7.5 & 9 A	10 $\frac{1}{8}$ "	3 $\frac{1}{4}$ "	4"	Socket —, +7.5 & 9	A: 50 m.a.	6 lb. 1 oz.
	90 B				Socket —, +90	B: 5.0-15.0 m.a.	
755	6 & 7.5 A	8 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "	3 $\frac{3}{4}$ "	Socket —, +6 & 7.5	A: 50 m.a.	3 lb. 9 oz.
	75 B				Socket —, +75	B: 5.0-12.0 m.a.	
756	7.5 & 9 A	8 $\frac{7}{8}$ "	2 $\frac{1}{8}$ "	3 $\frac{3}{8}$ "	Socket —, +7.5 & 9	A: 50 m.a.	2 lb. 14 oz.
	90 B				Socket —, +90	B: 5.0-12.0 m.a.	
757	9 A	9 $\frac{7}{8}$ "	2 $\frac{3}{8}$ "	4 $\frac{7}{8}$ "	Recessed Plug —, +9	A: 50 m.a.	4 lb. 12 oz.
	90 B				Recessed Plug —, +90	B: 5.0-12.0 m.a.	
"B" BATTERY FOR HOME RECEIVERS							
487	45	5 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "	7 $\frac{1}{4}$ "	Socket —, +22.5, +45	7.0-12.0 m.a.	4 lb. 2 oz.
"A" BATTERIES FOR PORTABLE RECEIVERS							
713	7.5	3 $\frac{3}{8}$ "	5 $\frac{3}{16}$ "	2 $\frac{3}{8}$ "	Socket —, +7.5	50 m.a.	6 $\frac{1}{2}$ oz.
717	7.5	2 $\frac{7}{8}$ "	1 $\frac{1}{8}$ "	3 $\frac{3}{8}$ "	Socket —, +7.5	50 m.a.	8 oz.
726	4.5	3 $\frac{1}{8}$ "	1 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "	Socket —, +4.5	50-100 m.a.	10 $\frac{1}{2}$ oz.
736	4.5	3 $\frac{1}{8}$ "	1 $\frac{1}{8}$ "	4 $\frac{3}{8}$ "	Socket —, +4.5	50-100 m.a.	1 lb.
742	1.5	2 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "	3 $\frac{3}{8}$ "	Socket —, +1.5	100-250 m.a.	1 lb. 5 oz.
744	6	2 $\frac{3}{8}$ "	2 $\frac{3}{8}$ "	3 $\frac{3}{8}$ "	Socket —, +6	50 m.a.	1 lb. 5 oz.
745	1.5	3 $\frac{7}{8}$ "	1 $\frac{1}{8}$ "	10 $\frac{3}{8}$ "	Socket —, +1.5	100-350 m.a.	2 lb. 10 $\frac{1}{2}$ oz.
746	4.5	3 $\frac{1}{8}$ "	1 $\frac{1}{8}$ "	4 $\frac{3}{8}$ "	Socket —, +4.5	50-100 m.a.	1 lb. 3 $\frac{3}{8}$ oz.
747	6	3 $\frac{7}{8}$ "	1 $\frac{7}{8}$ "	10 $\frac{3}{8}$ "	Socket —, +6	50 m.a.	2 lb. 11 oz.
"B" BATTERIES FOR PORTABLE RECEIVERS							
482	45	3 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	5 $\frac{1}{2}$ "	Socket —, +45	5.0-15.0 m.a.	1 lb. 15 oz.
484	45	3 $\frac{3}{8}$ "	2 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "	Socket —, +45	5.0-20.0 m.a.	3 lb. 2 oz.
"A" BATTERIES FOR PERSONAL RECEIVERS							
720	1.5	2 $\frac{1}{8}$ "	1 $\frac{3}{8}$ "	3 $\frac{1}{8}$ "	Socket —, +1.5	25-250 m.a.	6 $\frac{1}{2}$ oz.
724	6	1 $\frac{7}{8}$ "	1 $\frac{7}{8}$ "	2 $\frac{1}{8}$ "	Flat Contact —, +6	50 m.a.	2 $\frac{1}{2}$ oz.
950	1.5	1 $\frac{21}{64}$ " D		2 $\frac{27}{64}$ "	Flat Contact —, +1.5	25-250 m.a.	3 oz.
964	1.5	1 $\frac{1}{8}$ " D		4 $\frac{11}{64}$ "	Flat Contact —, +1.5	100-250 m.a.	5 $\frac{9}{10}$ oz.
"B" BATTERIES FOR PERSONAL RECEIVERS							
487	75	1 $\frac{1}{8}$ "	1 $\frac{3}{8}$ "	6 $\frac{1}{8}$ "	Snap Type —, +75	1.0-10.0 m.a.	14 $\frac{3}{4}$ oz.
455	45	2 $\frac{3}{8}$ "	1"	3 $\frac{1}{8}$ "	Snap Type —, +45	1.0-10.0 m.a.	7 $\frac{1}{2}$ oz.
457	67.5	2 $\frac{1}{8}$ "	1 $\frac{3}{8}$ "	2 $\frac{1}{2}$ "	Snap Type —, +67.5	1.0-8.0 m.a.	7 $\frac{1}{2}$ oz.
467	67.5	2 $\frac{1}{8}$ "	1 $\frac{3}{8}$ "	3 $\frac{45}{64}$ "	Snap Type —, +67.5	1.0-10.0 m.a.	12 oz.
477	67.5	1 $\frac{3}{8}$ "	6 $\frac{3}{64}$ "	5 $\frac{7}{8}$ "	Snap Type —, +67.5	1.0-8.0 m.a.	8 $\frac{1}{2}$ oz.
490	90	3 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	3 $\frac{45}{64}$ "	Snap Type —, +90	1.0-10.0 m.a.	15 oz.
"A" BATTERIES FOR POCKET RECEIVERS							
635	1.5	1 $\frac{1}{64}$ " D		1 $\frac{3}{16}$ "	Flat Contact —, +1.5	30-150 m.a.	1 $\frac{1}{2}$ oz.
915	1.5	3 $\frac{5}{64}$ " D		1 $\frac{3}{16}$ "	Flat Contact —, +1.5	25-100 m.a.	$\frac{3}{8}$ oz.
935	1.5	1 $\frac{1}{64}$ " D		2"	Flat Contact —, +1.5	25-100 m.a.	1 $\frac{1}{2}$ oz.
"B" BATTERIES FOR POCKET RECEIVERS AND SPECIAL EQUIPMENT							
411	15	1 $\frac{1}{8}$ "	$\frac{5}{8}$ "	1 $\frac{29}{64}$ "	Flat Contact —, +15	0.3-1.0 m.a.	$\frac{4}{5}$ oz.
412	22.5	1 $\frac{1}{8}$ "	$\frac{5}{8}$ "	2"	Flat Contact —, +22.5	0.3-1.0 m.a.	1 $\frac{1}{2}$ oz.
413	30	1 $\frac{1}{8}$ "	$\frac{5}{8}$ "	2 $\frac{1}{8}$ "	Flat Contact —, +30	0.3-1.0 m.a.	1 $\frac{1}{2}$ oz.
415	45	1 $\frac{3}{64}$ "	$\frac{5}{8}$ "	3 $\frac{43}{64}$ "	Snap Type —, +45	0.3-1.0 m.a.	2 $\frac{1}{2}$ oz.
417	15	1 $\frac{1}{8}$ "	$\frac{3}{8}$ "	1 $\frac{3}{8}$ "	Flat Contact —, +15	0.5-2.0 m.a.	1 $\frac{1}{2}$ oz.
420	22.5	1 $\frac{1}{8}$ "	$\frac{3}{8}$ "	2 $\frac{1}{8}$ "	Flat Contact —, +22.5	0.5-2.0 m.a.	2 $\frac{1}{2}$ oz.
430	30	1 $\frac{1}{8}$ "	1"	2 $\frac{1}{8}$ "	Flat Contact —, +30	0.5-2.0 m.a.	3 $\frac{1}{2}$ oz.
493	300	2 $\frac{1}{8}$ "	2 $\frac{7}{8}$ "	3 $\frac{3}{8}$ "	Pin Jacks —, +300	.05-0.5 m.a.	14 $\frac{1}{2}$ oz.

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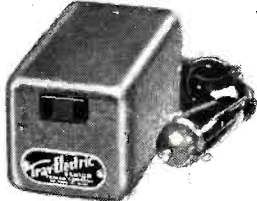


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- Small Dictating Machines
- Radios
- Test Equipment, etc.
- Turntables
- Portable Phonographs

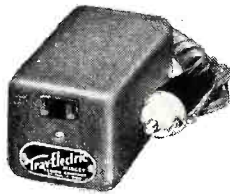


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- Portable Phonographs
- Lights
- Electric Shavers, etc.



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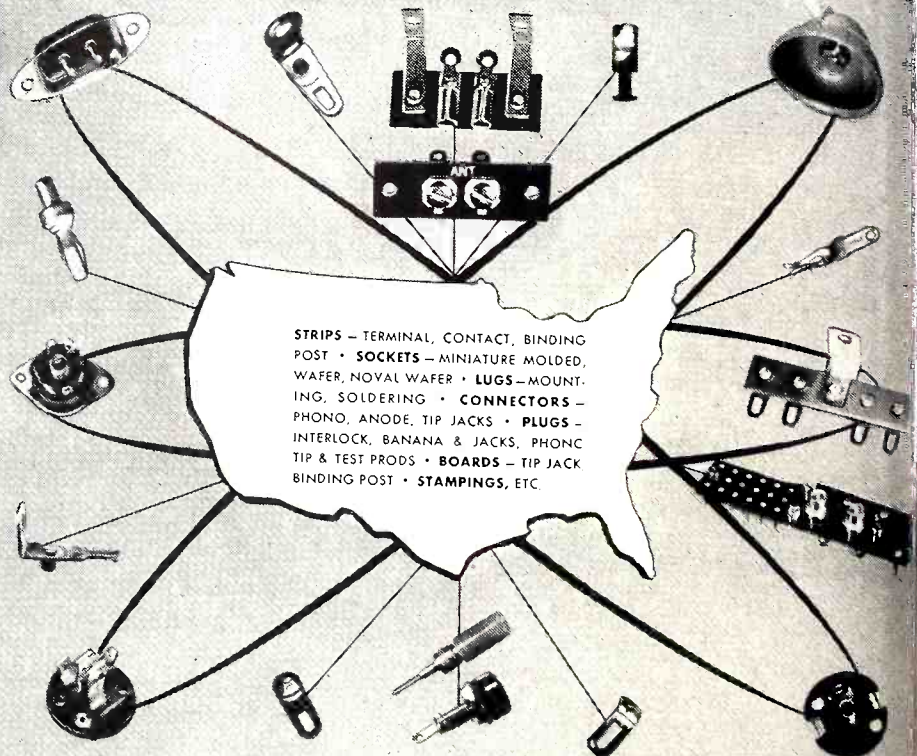
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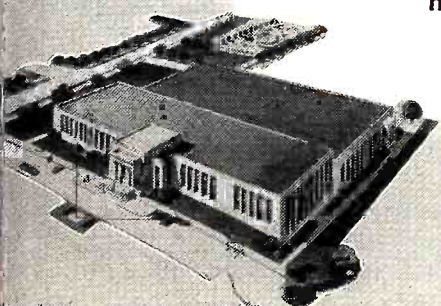
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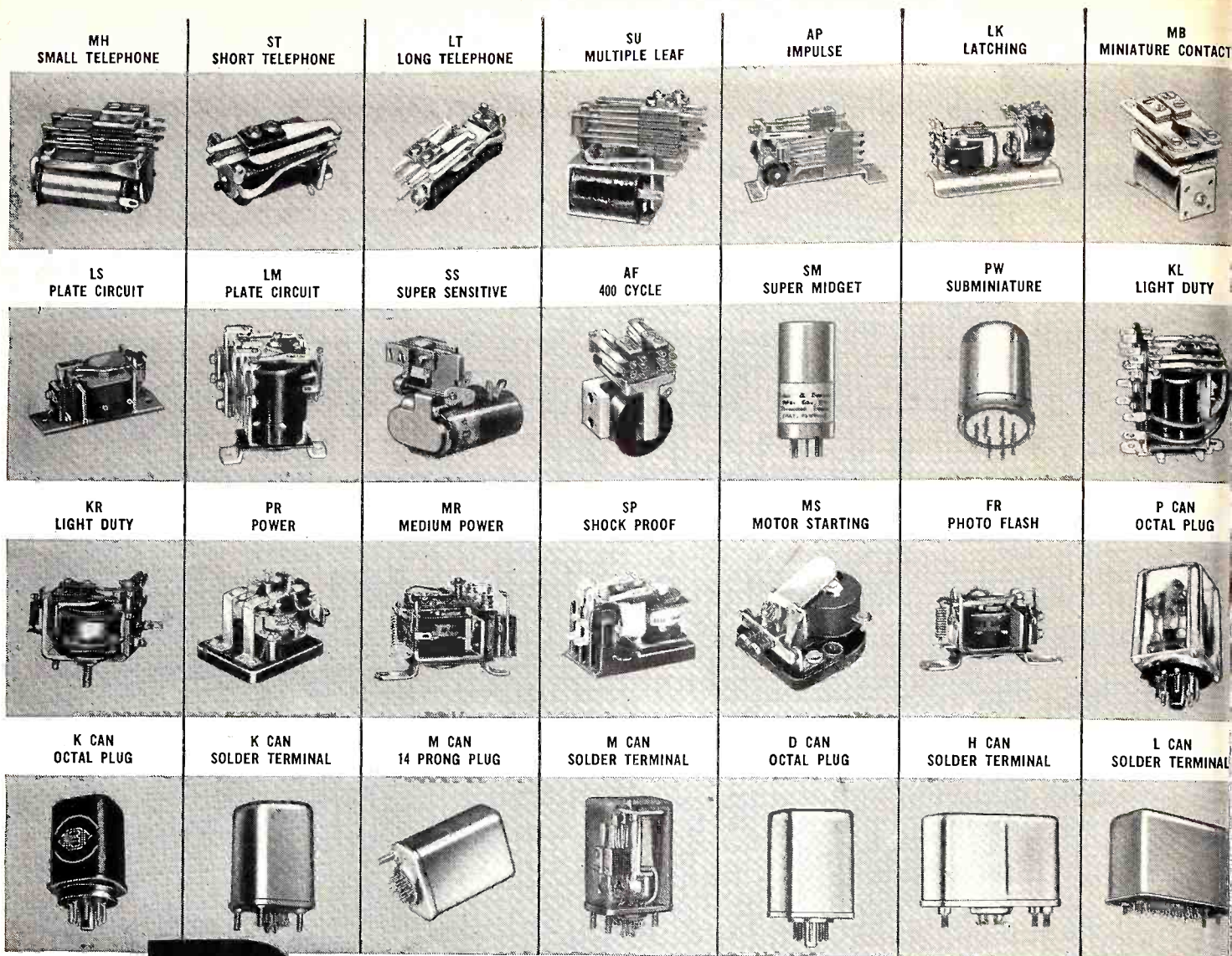
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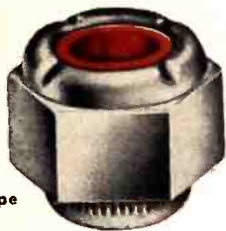


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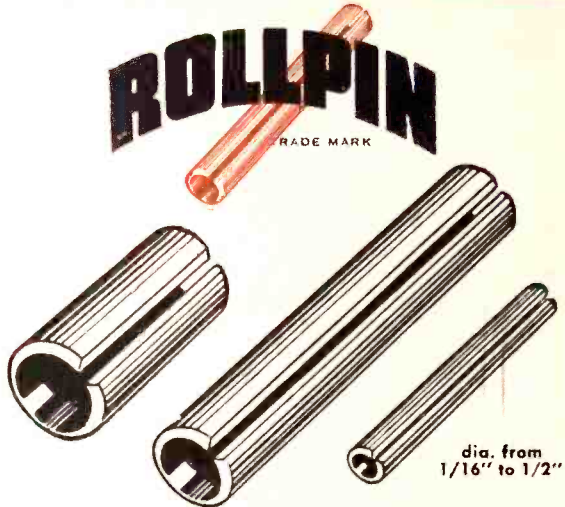
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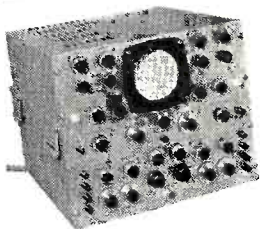
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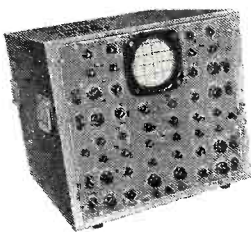
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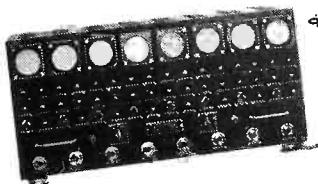
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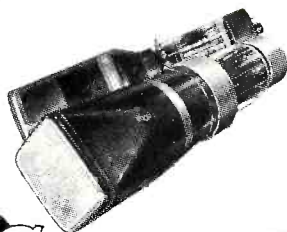
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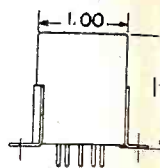
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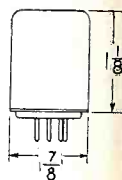
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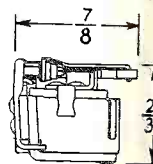
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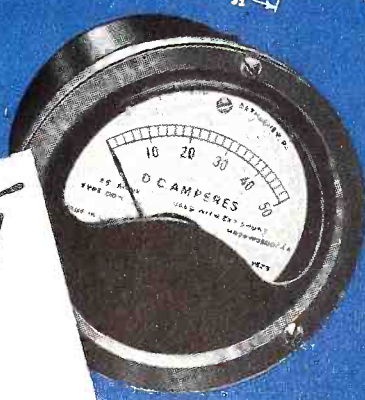
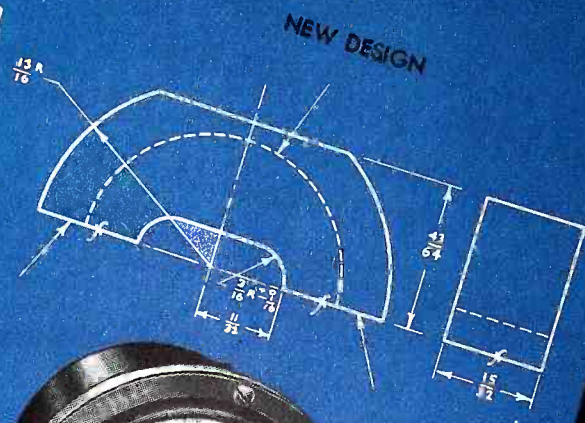
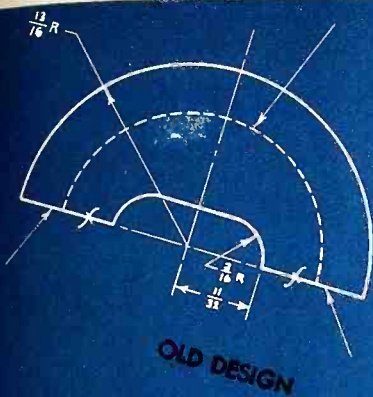
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When the Roller-Smith Corporation decided to ruggedize their electrical instruments to meet Military Specifications, they discovered that they needed a smaller permanent magnet — one that would do the same job as the old one they were using.

They called on Crucible's technical service for assistance. In short order, Roller-Smith's objective was attained. For through improved design, and better quality control in production, Crucible developed an alnico magnet that was 13.5% smaller and lighter than the previous one . . . but with the same magnetic strength.

The Roller-Smith story is typical of the many cases solved with Crucible Alnico Magnets, because Crucible magnets have the highest gap flux per unit of weight of any on the market. Crucible has been the leading producer of Alnico Permanent Magnets since the industry started. When you have a magnet problem, call on Crucible.

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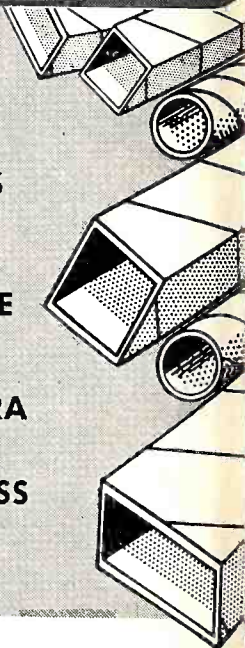
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QUINTERRA . . . Johns-Manville insulating material for class B & H transformers.

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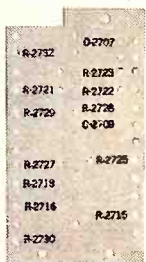
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Offers You FULL RANGE of Finest Quality Laminates

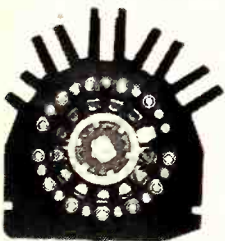
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Paper Base Tubing

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750	X	Paper Base, Phenolic Resin, Mechanical (PBM)
550	XX	Paper Base, Phenolic Resin, Mechanical & Electrical	MIL-P-3115B (PBG)
520	XXX	Paper Base, Phenolic Resin, Electrical	MIL-P-3115B (PBE)
770	P(XP)	Paper Base, Phenolic Resin, Cold Punching, General Electrical	.....
772	PC	Paper Base, Phenolic Resin, Cold Punching, Secondary Electrical	.....
774	XXP	Paper Base, Phenolic Resin, Hot Punching, Good Electrical	.....
776	XXXP	Paper Base, Phenolic Resin, Hot Punching, High Frequency	MIL-P-3115B (PBE-P)
900	C	Fabric Base, Phenolic Resin, Mechanical	MIL-P-15035B (FBM)
910	CE	Fabric Base, Phenolic Resin, Good Electrical, Fair Mechanical	MIL-P-15035B (FBG)
940	L	Fabric Base (Fine Weave), Phenolic Resin, Fine Machinability	MIL-P-15035B (FBI)
950	LE	Fabric Base (Fine Weave), Phenolic, Good Electrical, Fair Mechanical	MIL-P-15035B (FBE)
580	A	Asbestos Paper, Phenolic Resin, Heat Resistance, Low Voltage	..... (PBH)
980	AA	Asbestos Cloth, Phenolic Resin, Very High Impact	..... (FBH)
115	G8	Glass Mat, Melamine Resin, Fire & Arc Resistant	.....
120	G1, G2	Staple Glass Cloth, Phenolic Resin, Heat Resistance	.....
130	G7	Continuous Glass Cloth, Silicone Resin, High Heat Resistance	MIL-P-997B (GSG)
135	G6	Staple Glass Cloth, Silicone Resin, High Heat Resistance	.....
140	G5	Continuous Glass Cloth, Melamine Resin, Arc Resistance, High Strength	MIL-P-15037B (GMG)
170	G3	Continuous Glass Cloth, Phenolic Resin, Highest Strength	.....
190	N1	Nylon Cloth, Phenolic Resin, Lowest dielectric & loss factor	MIL-P-15047B (NPG)
780	....	Paper Base, Phenolic Resin, Good Insulation Resistance	MIL-P-3115B (PBE-P)
9101	....	Fabric Base, Phenolic Resin, Low Water Absorption	Navy Spec 33B4
920	Fabric Base (Medium Weave), Phenolic, Good Impact, Good Machinability	MIL-P-15035B (FBM)

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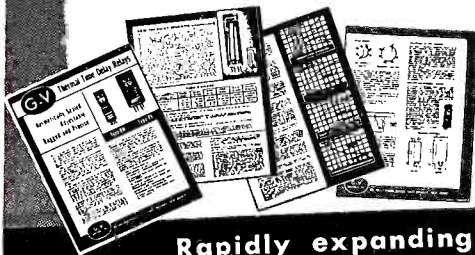
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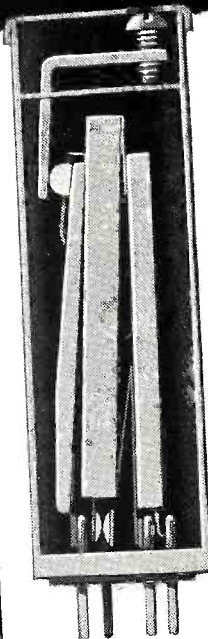
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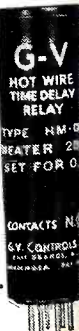


Type RO

Typical Uses: Delaying plate voltage application • Producing hold-over interval after interruption of power • Delaying automatic shut-down until a fault has continued for a specified period

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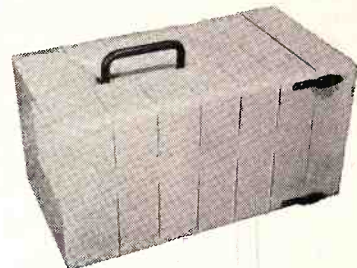
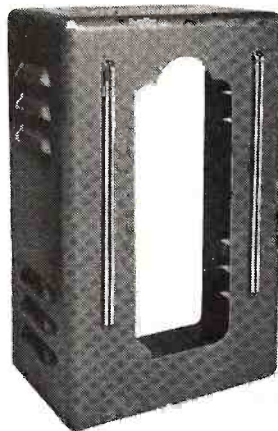
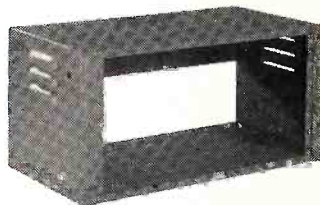
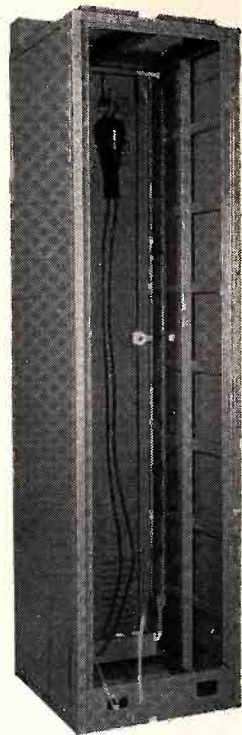


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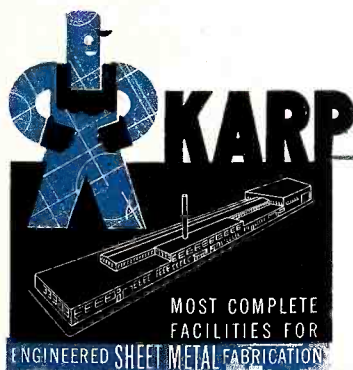
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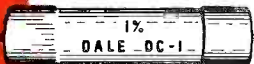
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 DC-1/2 — 1/2 Watt
1 Ohm to 5 Megohms

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1 Ohm to 10 Megohms

 DC-2 — 2 Watts
5 Ohms to 50 Megohms

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1 Ohm to 2 Megohms

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provides users with the only accurate and reliable product source available in the electronic industry...

They refer FIRST to the "GUIDE."



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MINIATURE POWER RESISTORS

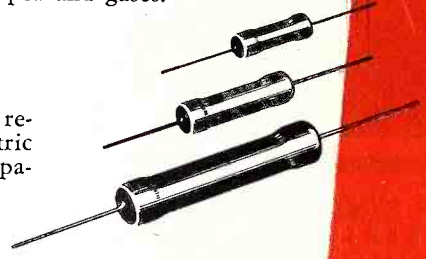
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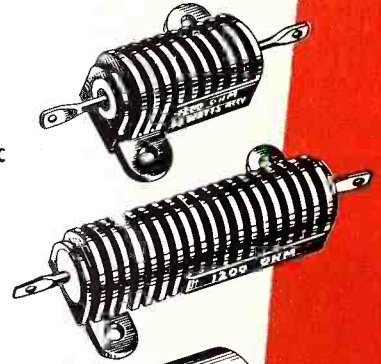
RS TYPES

Silicone sealed offering maximum resistance to abrasion, high dielectric strength, and maximum heat dissipation.



RH TYPES

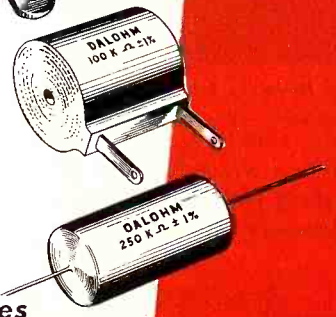
Silicone sealed in a die-cast, black anodized radiator finned housing and mounts on sub-panel for maximum heat dissipation.



- Temperature coefficient 0.00002/degree C
- Ranges from 0.1 Ohms to 55,000 Ohms, depending on type
- Tolerance 0.05%, 0.1%, 0.25%, 0.5% (above 1 Ohm); 1%, 3%, 5% (all ranges)

WW TYPES

For critical applications. Exceed JAN-R-93A or MIL-R-93A specifications.



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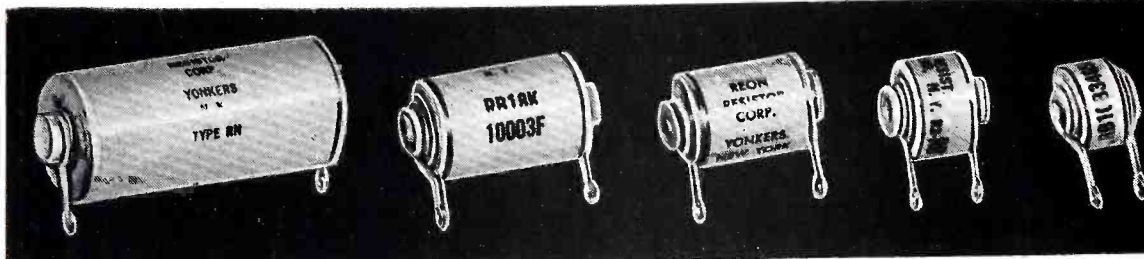
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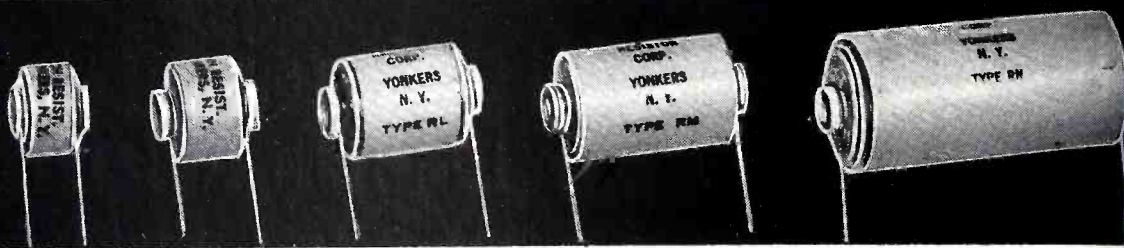
of Precision Wire Wound Resistors

in sample or production quantities



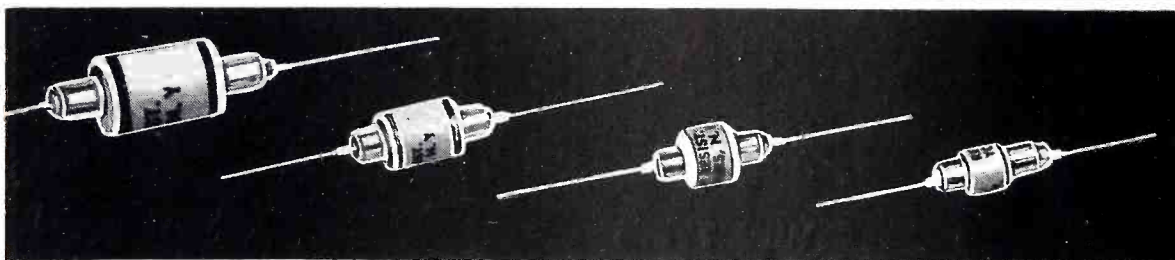
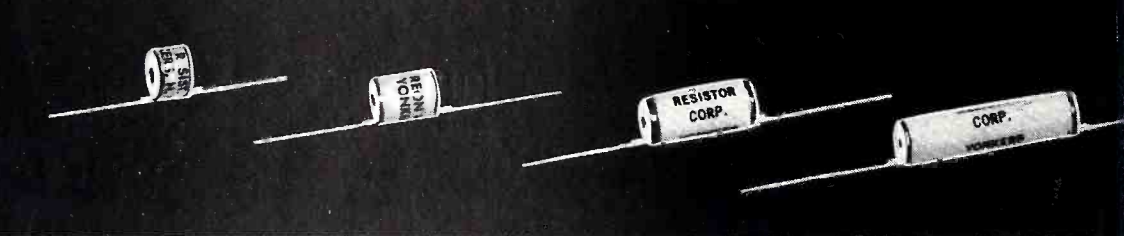
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Lug Terminals
Wattage Ratings:
¼ to 1 watt
Tolerance: 1% to .02%
Resistance Range:
.1 ohm to 4 meg.
Exceed all MIL-R-93A
specifications

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SERIES**
Lug Terminals or
Radial Leads
Tolerance: 1% to .02%
Wattage Ratings:
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Resistance Range:
.1 to 15 meg.
Same construction as
MIL-R-93A series



**MINIATURE
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Radial or Axial Leads
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Resistance Range:
.1 ohms to 1.6 meg.
Physical Size: 3/8" dia.—
¼" to 1¼" long

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SERIES**
Radial or Axial Leads
Wattage Ratings:
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Physical Size: ¼" dia.—
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For use where space
is important



**CENTRAL AXIAL
LEAD TYPES**
Wattage Ratings:
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Physical Size: ¼" to 7/16"
dia.—5/8" to 1¼" long
Small, rugged, self-
supporting, designed for
ease in assembly

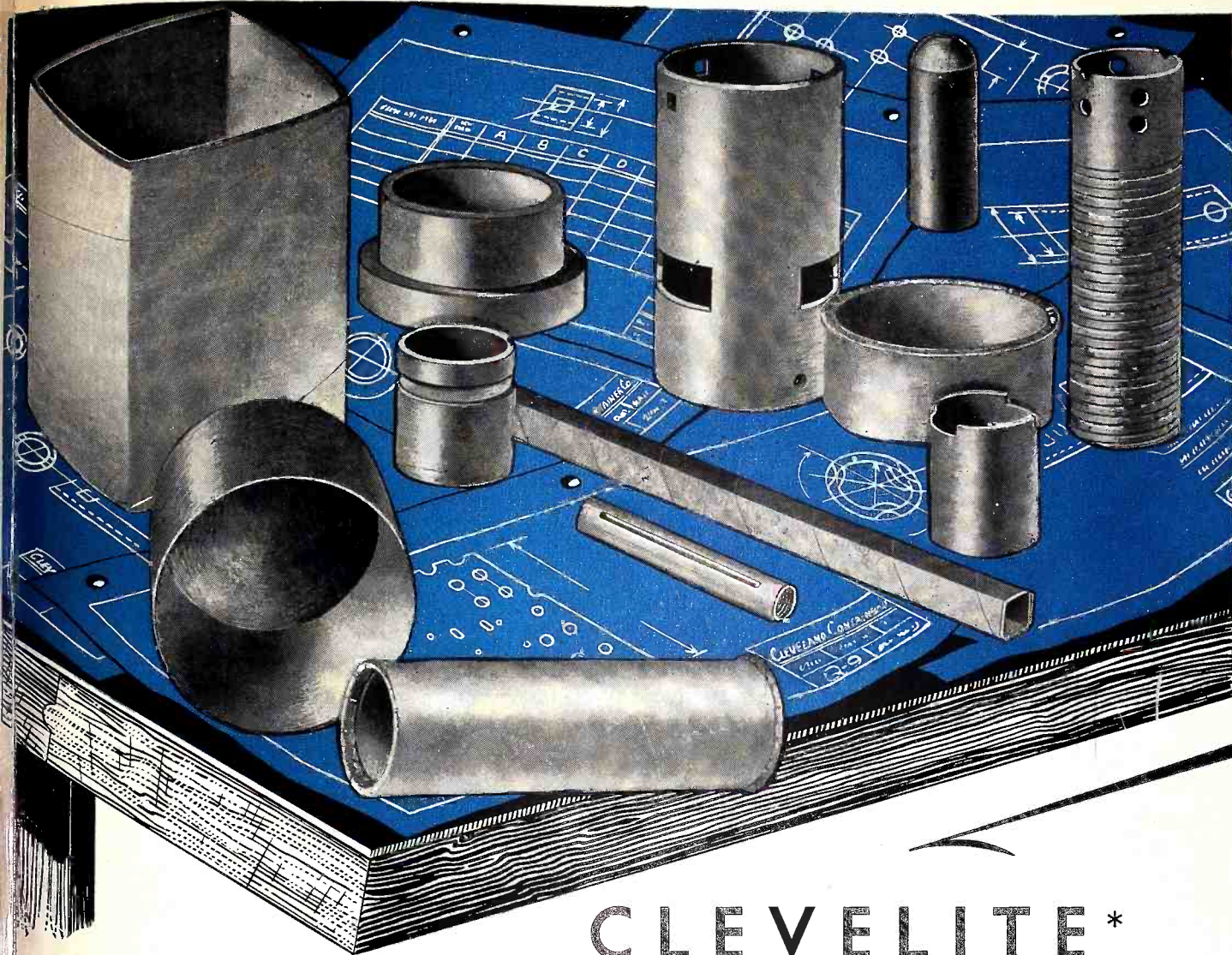
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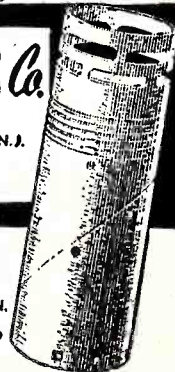
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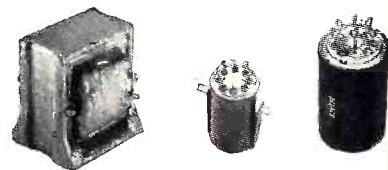
We produce our own magnet wire of the highest quality . . . specializing in size from 22 AWG to 50, insulated with enamel, formvar, dipsol (liquid nylon), cotton, silk, glass, or any combination of the above insulations. Our automatic machinery combines high capacity with precision control at every step.

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SOUND POWERED *Electric* TELEPHONES and HANDSETS



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		10"	25	1.35
		12"	25	2.25
		16"	25	4.10
RED LABEL	Single Face	12"	25	1.80
		16"	25	3.25
YELLOW LABEL	Double Sided	8"	25	0.85
		10"	25	1.10
		12"	25	1.80
		16"	25	3.25
REFERENCE	Double Sided	10"	25	0.90
		12"	25	1.35
		16"	25	2.45
BLUE LABEL	Double Sided	6½"	50	0.45
		8"	50	0.60
		10"	50	0.90
MASTERS	Double Sided	12"	25	2.90
		13¼"	25	3.70
		17¼"	25	6.20
	Single Face	12"	25	2.30
		13¼"	25	2.60
	17¼"	25	4.55	

Δ Prices slightly higher in Pacific Coast and Southwestern Areas.
† Standard 45 rpm disc with 1½" diameter center hole.



audiotape*

Audiotape is precision made to the same exacting standards of quality and uniformity that have characterized Audiorecords for more than a decade—your assurance of maximum fidelity, uniformity, frequency response, and freedom

from background noise and distortion. Its mechanical and magnetic properties are carefully balanced to assure optimum overall performance in your recording machines.

Length In Ft.	Reel	Oxide	Type No.		List Price Each
			Oxide Out	Oxide In	

PLASTIC BASE AUDIOTAPE

150	3" Plastic	Red	150	151	\$0.85
			350	351	1.60
			640	641	3.50
300	4" Plastic	Black	640	641	3.50
			650	651	3.50
600	5" Plastic	Red	650	651	3.50
			1200 †	1240	5.50
			1250	1251	5.50
2500	Std. NAB Hub 10 1/2" Al. Reel	Red	—	2551 H	10.00
			—	2551 R	12.85
5000	Std. NAB Hub 14 1/2" Al. Reel	Red	—	5051 H	20.00
			—	5051 R	26.00

PAPER BASE AUDIOTAPE

150	3" Plastic	Red	120	121	\$0.70
			320	321	1.25
			600	601	2.25
300	4" Plastic	Black	600	601	2.25
			620	621	2.25
600	5" Plastic	Red	620	621	2.25
			1200 †	1200	3.50
			1220	1221	3.50
2500	Std. NAB Hub 10 1/2" Al. Reel	Red	—	2521 H	6.50
			—	2521 R	9.35

TAPE RECORDING ACCESSORIES

Audio Self-Timing Leader Tape, box of 150 ft.	\$0.60
Adhesive Reel Labels, pack of 30.	0.25
Audio Head Demagnetizer, each.	12.00
Audio Alignment Tape, 230 ft. on 4" reel.	12.00

† 1250 ft. reels, with small hub, available at same price.



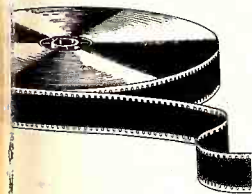
AUDIO SELF-TIMING LEADER TAPE
¼" tape of durable white plastic material, for identifying recorded selections. Lasts paper tapes many times over. Spaced markings for accurate timing.



ADHESIVE REEL LABELS
Convenient, press-on adhesive labels for positive identification of recorded tape reels. Easy to apply or remove.



AUDIO HEAD DEMAGNETIZER
A 110-115 volt A-C electromagnet assembly with extended pole pieces, for removing permanent magnetism from magnetic recording heads.



audiofilm*

Audiofilm is a professional quality magnetic recording medium for the motion picture and television industries—offering all the advantages of high-fidelity, uniformity and easy editing which are inherent in Audiotape. 1000 ft, 35 mm, 17½ mm and 16 mm. Red oxide coating on cellulose acetate base. Other sizes on request.

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The complete line of Audiopoints covers the full range of recording and playback needs. Available in Sapphire, Stellite and Steel—precision made by skilled craftsmen, for matchless recordings and reproduction of either conventional or microgroove recordings.



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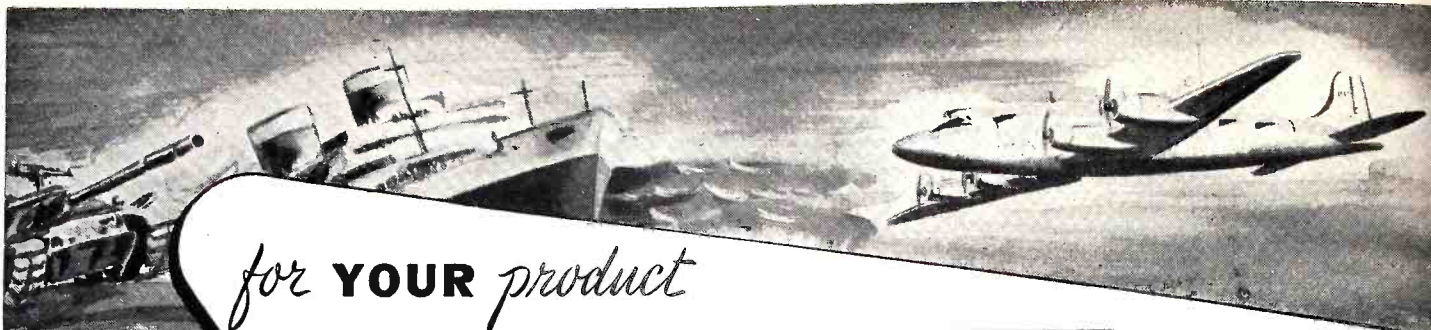
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New York 16, N. Y. Cables "ARLAB"

The above Audio Devices products are available through approximately 600 authorized distributors, located in principal cities from coast to coast.

Ask your dealer for descriptive leaflets on Audiotape, Audiorecords, and Audiopoints. Or write to Audio Devices, Inc.
Audiorecords are manufactured in the U.S.A. under exclusive license from PYRAL, S.A.R.L., Paris.

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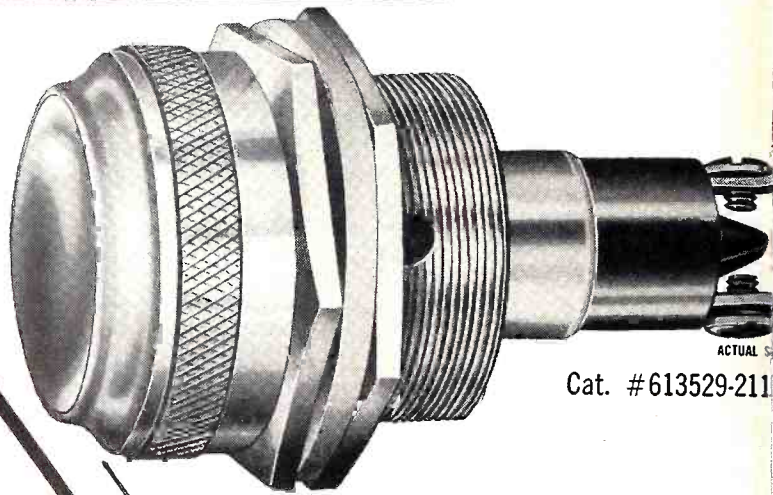
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THE BIG ONE

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ACTUAL SIZE
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Dialco HAS THE COMPLETE LINE OF INDICATOR and PANEL LIGHTS

This **BIG** one

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THE LITTLE ONE

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to suit your own special conditions and requirements will be sent promptly and *without cost*. Just outline your needs. Let our engineering department assist in selecting the *right lamp* and the *best pilot light* for YOU.



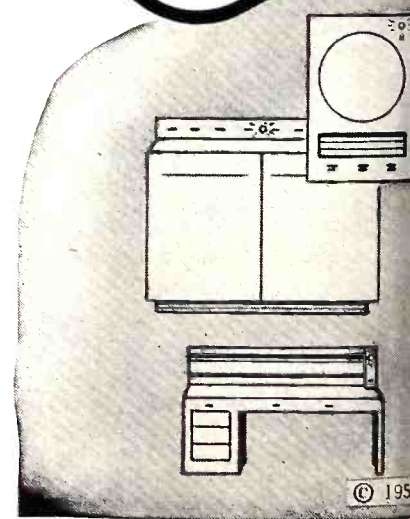
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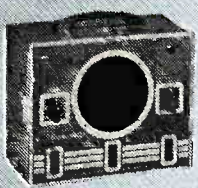
HYACINTH 7-7600



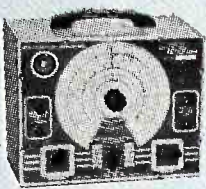
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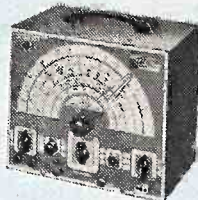
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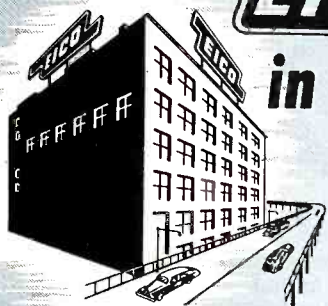


New 214K VTVM KIT \$34.95 WIRED \$54.95

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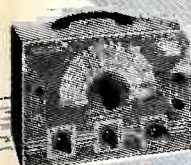
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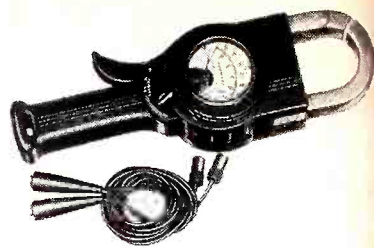
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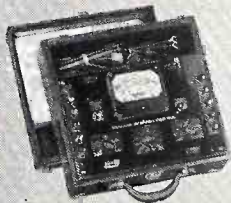
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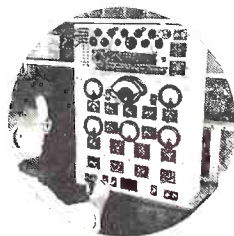
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Electronic Tube Analyzer
 Tests tubes under exact operating potentials. Accurately determines true mutual conductance of all tubes, in accordance with manufacturers' rated operating conditions, or under special operating conditions.



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 A three-in-one instrument providing a self-contained Volt-Ohm-Milliammeter, a high impedance electronic D-C Volt-Ohmmeter, and a probe type Vacuum Tube Voltmeter for use to 300 megacycles. Exceptionally stable and accurate. Has specially designed extremely small RF and D-C probes.

WHEN YOU NEED POTENTIOMETERS THAT HAVE

... GUARANTEED EXTREME ACCURACY
... HIGH RESOLUTION

... LOW TORQUE
... LOW NOISE LEVEL

... LONG SERVICE LIFE
... SMALL SIZE

... your best choice is FAIRCHILD PRECISION POTENTIOMETERS

... and here's why

Products—Precision is literally designed and built into Fairchild Precision Potentiometers. Shaft, mounting plate, and housing are made to extremely close tolerances. Windings are custom-made by an exclusive technique.

Service—Each Fairchild Precision Potentiometer is

custom-built with windings tailored to individual applications. Therefore, Fairchild engineers can help in solving many complex problems, and their recommendations are offered without obligation. Similarly, the services of the Fairchild Potentiometer Sample Laboratory are available at nominal cost.

Manufacturing Know-How—Fairchild originally made potentiometers for its own equipment because no units then available were satisfactory from the standpoint of precision. Present manufacturing practice is based on new knowledge gained since then, and constant refinement of this knowledge.

Experience—Over ten years of comprehensive experience in design, manufacture, and application are now behind Fairchild Precision Potentiometers. The first application was the Fairchild Computing Gunsight. Today's applications not only cover a wide range of military equipment, but extend to electrical computing systems for machine-tool controls, process controls, telemetering, and analog computers of all types.

SPECIFICATIONS OF FAIRCHILD PRECISION POTENTIOMETERS (Nominal Values)

	Type 736	Type 746	Type 756	Type 747	Type 748	Type D-C-P
Resistance Range, ohms						
Linear (standard), min.	680 ±5% a	680 ±5% a	800 ±5% a	1,800 ±5% a	2,250 ±5% a	2,250 ±5% a
max.	115,000 ±5% a	115,000 ±5% a	40,000 ±5% a	90,000 ±5% a	150,000 ±5% a	150,000 ±5% a
Linear (special), min.	85 ±5% a	85 ±5% a	50 ±5% a	50 ±5% a	80 ±5% a	80 ±5% a
max.			45,000 ±5% a			
Non-Linear	b	b	b			
Electrical Function Angle, deg. (standard)	320 nominal	320 nominal	320 nominal c	351.3 ±0.5	354.5 ±0.5	354.5 ±0.5
(special)			350 nominal c d			
Electrical Contact Angle, deg.	340 nom.	340 nom.	340 nom. (std.)	351.3 (+4, -0)	354.5 (+4, -0)	354.5 (+4, -0)
Mechanical Rotation	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous
Linearity Tolerance (guaranteed), per cent						
Linear, Some Non-Linear	±0.50 e	±0.50 e	±0.25	±0.15 f	±0.10 g	±0.10 g
Other Non-Linear	±1.00	±1.00	±0.35 h			
Mechanical Accuracy						
Concentricity (shaft to pilot bushing), in., FIR max.	0.0025	0.0010	0.0010	0.0025	0.0025	0.0025
Radial Shaft Play, in., max.	0.0015	0.0009	0.0009	0.0015	0.0015	0.0015
Shaft, dia., in.	i	i	i	i	i	i
Pilot Bushing, dia., in.	j	j	j	k	k	k
Weight, oz.-in. per cup	2.0	1.5	1.5	1.0	1.0	1.0
Wage (rated at 40 C ambient temperature)	2.5	2.5	2.5	4	5	5
Wage Breakdown at Sea Level (60 cycle) RMS	900	900	900	900	900	900
Taps, number per cup	9 m	1 mn	1 p	12 q	16 q	r
Accuracy of location, deg.	±1	±1	±1	±1	±0.5	±0.5
Width, deg., max.	s	s	1.00 t	0.75 t	0.60 t	0.60 t
Winding on Single Shaft, max.	5	20	20	10	10	
Operating Ambient Temperature Range, deg. C	-55 to +71	-55 to +71	-55 to +71	-55 to +71	-55 to +71	-55 to +71
Service Life, cycles, max.	5,000,000 u	5,000,000 u	5,000,000 u	10,000,000 u	10,000,000 u	10,000,000 u
Dimensions, in.						
Diameter	1.899	1.750	1.750	2.093	3.093	3.093
Length (one cup), max.	0.795	0.800 ±0.009	0.800 ±0.009	1.156	1.156	1.219
Threaded Length Per Unit Ganged	0.609	0.580 ±0.002	0.580 ±0.002	0.594	0.594	

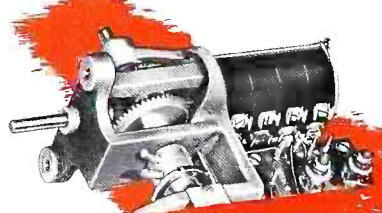
tolerance on both linearity and over-all resistance may vary or be improved, depending on resistance value required.
Maximum resistance range will vary according to function. Tolerance on over-all resistance of non-linear windings is ±5%.
Electrical function angles can be held to tolerance of ±1° by special order.
No shorted section.
Linearity up to ±0.30% on the higher resolution windings by special order.
Linearity up to ±0.10% on the higher resolution windings by special order.
Linearity up to ±0.05% on the higher resolution windings by special order.
With maximum of 3:1 slope ratio in high resistance ranges.
Centerless-ground stainless steel to 0.2500 in. (+0.0000, -0.0005).
Machined to 0.5000 in. (+0.0000, -0.0005).
Machined to 0.7500 in. (+0.0000, -0.0005).

m By adding dummy cup section, 19 taps can be provided.
n Two taps can be provided by slight design modification using terminal board clamp screw modified for wiper terminal.
p Two or more taps can be provided by slight design modification using additional boards. 13 taps can be provided by addition of terminal board sections.
q Depending on spacing requirements and without moving bridge or wiper terminal.
r No slip rings provided for taps, but within the cup 16 taps can be provided depending on spacing requirements and without moving the bridge or wiper terminal.
s One turn of wire.
t Varies with resolution.
u Life will be dependent upon specific potentiometer required.

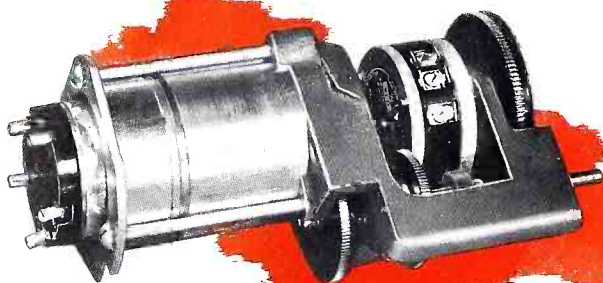
THESE SOLUTIONS TO PRECISION POTENTIOMETER PROBLEMS ARE TYPICAL OF FAIRCHILD'S PRODUCTS, SERVICE, AND KNOW-HOW



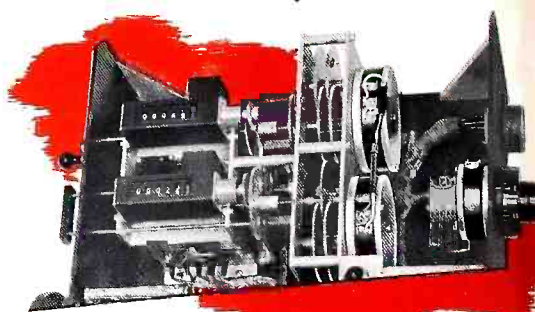
Quick and easy replacement of ganged precision potentiometers to simplify maintenance resulted in a series of packaged Fairchild plug-in units like this. Entire gang can be replaced in a few minutes because only end mounting plates are fastened down. No wires to disconnect or solder. Test points are provided on top of each potentiometer for quick checking.



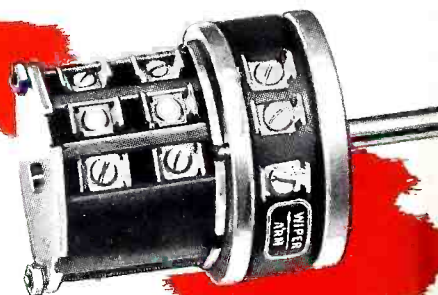
Electrical accuracy of the Fairchild Precision Potentiometers in this radar control assembly must match the mechanical precision of the gears. All of the potentiometers are non-linear (single-cycle log) and, in addition to the 1% linearity tolerance, the units in each pair must track each other within a taper tolerance of 0.1 to 1.0%. This means that the potentiometers in each pair must be identical with each other almost turn-for-turn.



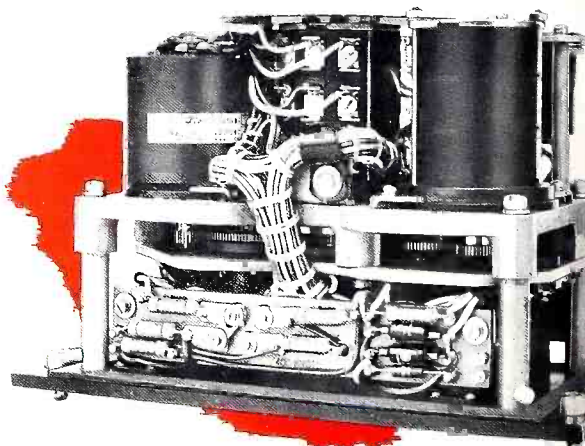
Low noise level, high resolution, extreme linearity, long life were the requirements that made engineers select the Fairchild Type 747 Precision Potentiometer for this computer assembly. These inherent qualities commonly result in the specification of Fairchild Precision Potentiometers for computer assemblies, calibration controls, servo mechanisms, and other instruments.



Accurate resetability in both the single-solution and integrating potentiometers was a prime consideration in this integrating computer application. Fairchild Precision Potentiometers can accurately reset to any selected resistance rotation angle, thereby eliminating hunting and carry-over errors.



Space saving and elimination of error accumulation resulted from ganging two Fairchild Type 736 non-linear potentiometers, specially wound to an empirical function, with a highly accurate Fairchild Type 747 linear unit on a common shaft.



Extremely high functional accuracy and mechanical precision that eliminates backlash and binding, which would cause serious errors in the computing system, are the principal reasons the Fairchild Precision Potentiometers were incorporated in this computer for a radar-gunfire control system.

• **FOR YOUR NEXT PRECISION POTENTIOMETER PROBLEM** be sure you have full information about Fairchild Precision Potentiometers and related services, including the Fairchild Potentiometer Sample Laboratory. You can get these details by writing today to Potentiometer Division, Fairchild Camera and Instrument Corporation, Park Avenue, Hicksville, Long Island, New York, Department 140-38J.

FAIRCHILD

PRECISION POTENTIOMETERS

WHEN YOU NEED POTENTIOMETERS THAT HAVE

... GUARANTEED EXTREME ACCURACY
... HIGH RESOLUTION

... LOW TORQUE
... LOW NOISE LEVEL

... LONG SERVICE LIFE
... SMALL SIZE

... your best choice is FAIRCHILD PRECISION POTENTIOMETERS

... and here's why

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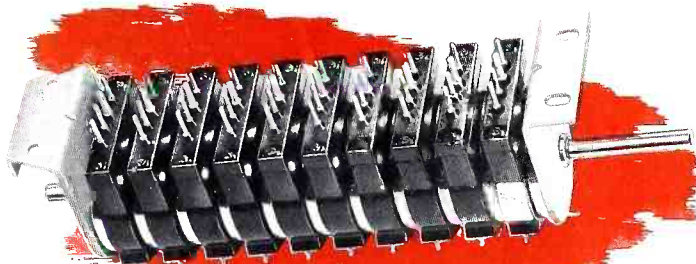
SPECIFICATIONS OF FAIRCHILD PRECISION POTENTIOMETERS (Nominal Values)

	Type 736	Type 746	Type 756	Type 747	Type 748	Type D-C-P
Resistance Range, ohms						
near (standard), min.	680 ±5% a	680 ±5% a	800 ±5% a	1,800 ±5% a	2,250 ±5% a	2,250 ±5% a
max.	115,000 ±5% a	115,000 ±5% a	40,000 ±5% a	90,000 ±5% a	150,000 ±5% a	150,000 ±5% a
near (special), min.	85 ±5% a	85 ±5% a	50 ±5% a	50 ±5% a	80 ±5% a	80 ±5% a
max.			45,000 ±5% a			
Non-Linear	b	b	b			
Electrical Function Angle, deg. (standard)	320 nominal	320 nominal	320 nominal c	351.3 ±0.5	354.5 ±0.5	354.5 ±0.5
(special)			350 nominal c d			
Electrical Contact Angle, deg.	340 nom.	340 nom.	340 nom. (std.)	351.3 (+4, -0)	354.5 (+4, -0)	354.5 (+4, -0)
Mechanical Rotation	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous
Positional Tolerance (guaranteed), per cent						
near, Some Non-Linear	±0.50 e	±0.50 e	±0.25	±0.15 f	±0.10 g	±0.10 g
Other Non-Linear	±1.00	±1.00	±0.35 h			
Mechanical Accuracy						
Concentricity (shaft to pilot bushing), in., FIR max.	0.0025	0.0010	0.0010	0.0025	0.0025	0.0025
Radial Shaft Play, in., max.	0.0015	0.0009	0.0009	0.0015	0.0015	0.0015
Shaft, dia., in.	i	i	i	i	i	i
Pilot Bushing, dia., in.	j	j	j	k	k	k
Weight, oz.-in. per cup	2.0	1.5	1.5	1.0	1.0	1.0
Temperature (rated at 40 C ambient temperature)	2.5	2.5	2.5	4	5	5
Temperature Breakdown at Sea Level (60 cycle) RMS	900	900	900	900	900	900
Turns, number per cup	9 m	1 mn	1 p	12 q	16 q	r
Accuracy of location, deg.	±1	±1	±1	±1	±0.5	±0.5
Depth, deg., max.	s	s	1.00 t	0.75 t	0.60 t	0.60 t
Coil Winding on Single Shaft, max.	5	20	20	10	10	
Operating Ambient Temperature Range, deg. C	-55 to +71	-55 to +71	-55 to +71	-55 to +71	-55 to +71	-55 to +71
Service Life, cycles, max.	5,000,000 u	5,000,000 u	5,000,000 u	10,000,000 u	10,000,000 u	10,000,000 u
Dimensions, in.						
Diameter	1.899	1.750	1.750	2.093	3.093	3.093
Length (one cup), max.	0.795	0.800 ±0.009	0.800 ±0.009	1.156	1.156	1.219
Threaded Length Per Unit Ganged	0.609	0.580 ±0.002	0.580 ±0.002	0.594	0.594	

Tolerance on both linearity and over-all resistance may vary or be improved, depending on resistance value required.
Maximum resistance range will vary according to function. Tolerance on over-all resistance of non-linear windings is ±5%.
Electrical function angles can be held to tolerance of ±1° by special order.
No shorted section.
Linearity up to ±0.30% on the higher resolution windings by special order.
Linearity up to ±0.10% on the higher resolution windings by special order.
Linearity up to ±0.05% on the higher resolution windings by special order.
With maximum of 3:1 slope ratio in high resistance ranges.
Centerless-ground stainless steel to 0.2500 in. (+0.0000, -0.0005).
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Machined to 0.7500 in. (+0.0000, -0.0005).

m By adding dummy cup section, 19 taps can be provided.
n Two taps can be provided by slight design modification using terminal board clamp screw modified for wiper terminal.
p Two or more taps can be provided by slight design modification using additional boards. 13 taps can be provided by addition of terminal board sections.
q Depending on spacing requirements and without moving bridge or wiper terminal.
r No slip rings provided for taps, but within the cup 16 taps can be provided depending on spacing requirements and without moving the bridge or wiper terminal.
s One turn of wire.
t Varies with resolution.
u Life will be dependent upon specific potentiometer required.

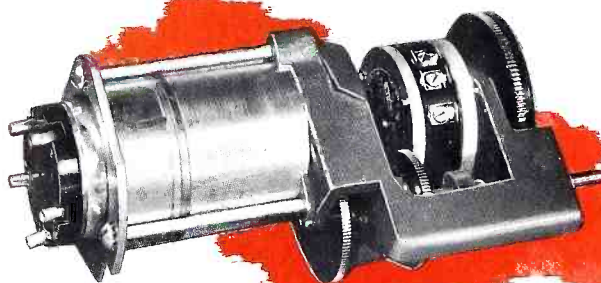
THESE SOLUTIONS TO PRECISION POTENTIOMETER PROBLEMS ARE TYPICAL OF FAIRCHILD'S PRODUCTS, SERVICE, AND KNOW-HO



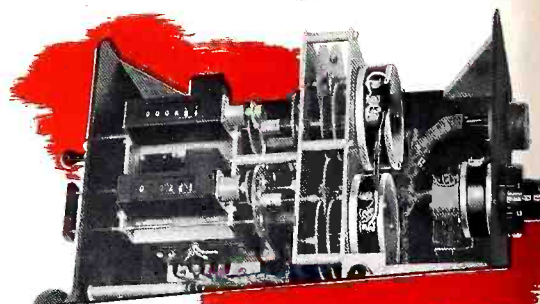
Quick and easy replacement of ganged precision potentiometers to simplify maintenance resulted in a series of packaged Fairchild plug-in units like this. Entire gang can be replaced in a few minutes because only end mounting plates are fastened down. No wires to disconnect or solder. Test points are provided on top of each potentiometer for quick checking.



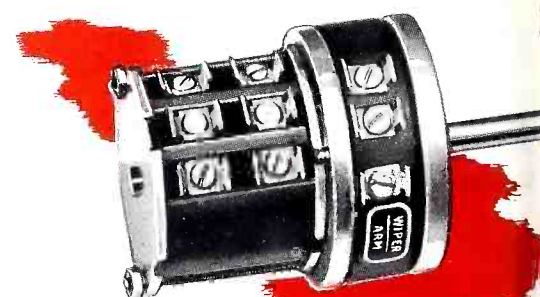
Electrical accuracy of the Fairchild Precision Potentiometers in this radar control assembly must match the mechanical precision of the gears. All of the potentiometers are non-linear (single-cycle log) and, in addition to the 1% linearity tolerance, the units in each pair must track each other within a taper tolerance of 0.1 to 1.0%. This means that the potentiometers in each pair must be identical with each other almost turn-for-turn.



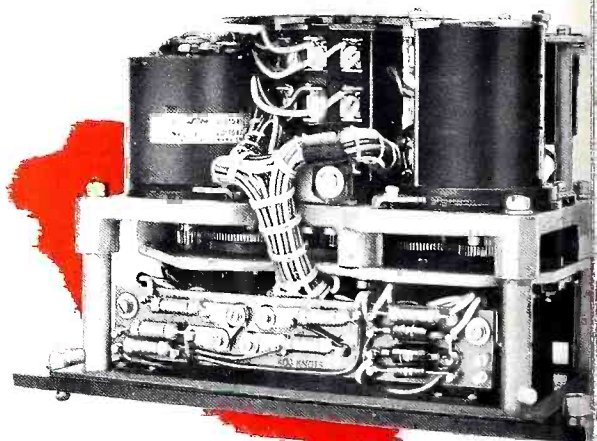
Low noise level, high resolution, extreme linearity, long life were the requirements that made engineers select the Fairchild Type 747 Precision Potentiometer for this computer assembly. These inherent qualities commonly result in the specification of Fairchild Precision Potentiometers for computer assemblies, calibration controls, servo mechanisms, and other instruments.



Accurate resetability in both the single-sol and integrating potentiometers was a prime consideration in this integrating computer application. Fairchild Precision Potentiometers can accurately reset to any selected resistance rotation angle, thereby eliminating hunting carry-over errors.



Space saving and elimination of error accumulation resulted from ganging two Fairchild Type 736 non-linear potentiometers, specially worked to an empirical function, with a highly accurate Fairchild Type 747 linear unit on a common shaft.



Extremely high functional accuracy and mechanical precision that eliminates backlash and binding, which would cause serious errors in a computing system, are the principal reasons that Fairchild Precision Potentiometers were incorporated in this computer for a radar-gunfire control system.

• **FOR YOUR NEXT PRECISION POTENTIOMETER PROBLEM** be sure you have full information about Fairchild Precision Potentiometers and related services, including the Fairchild Potentiometer Sample Laboratory. You can get these details by writing today to Potentiometer Division, Fairchild Camera and Instrument Corporation, Park Avenue, Hicksville, Long Island, New York, Department 140-38J.

FAIRCHILD

PRECISION POTENTIOMETERS



from design to production line...

the STAVER company

serves the electronics industry **2** ways

the
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line of
electronic
specialties

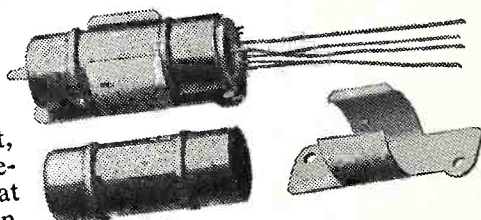


mini-shield* and clip

Types to fit *all* miniature tubes. Locks tube in socket, prevents vibration. Engineered to accommodate variations in diameter.

sub-mini-shield

Combination shield, clip and mount, for sub-miniature tubes. Close tube-to-shield contact for maximum heat dissipation. Firm clamping action. Easy to mount.

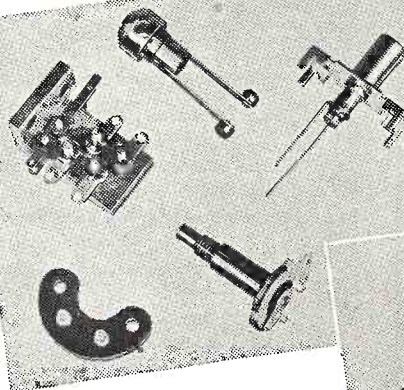


mini-spring*

A vibration-proof tube guard that keeps a steady axial downward pressure and provides sideways support in vertical or horizontal mounting position. Locks or releases tube at touch of a finger.

assemblies

Special electronic assemblies—to your specifications—controls, relays, connectors, switches, terminal boards, etc. Design assistance when required.



stampings

Simple or intricate... large or small quantities. Automatic equipment—close tolerances. Non-ferrous metals a specialty.



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specifications

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Instruments and components

i n s t r u m e n t s

Electronik function plotter

Automatically plots the relation between any two variables, showing one directly as a function of the other. 11-inch full scale chart travel (Y-axis); cogged neoprene belt drive provides minimum hysteresis. Reference index makes vertical positioning of chart easy. Spring-loaded rollers prevent chart slippage.

For information, write for Data Sheet No. 10.0-5.

Electronik duplex two pen recorder

Simultaneously measures any two independent variables on a single chart. Has two independent measuring systems, each with its own pen. Both pens can traverse the full 11-inch chart. Both measuring circuits are standardized simultaneously by one push-button. Any desired combination of ranges.

For information, write for Data Sheet No. 10.0-6.

Electronik narrow span recorder

Measures spans as narrow as 100 microvolts, readable to 0.1 microvolt, without need for external pre-amplifier. Applicable to temperature-difference and other measurements requiring high resolution. Available as a precision indicator, strip chart recorder, or circular chart pneumatic controller.

For information, write for Data Sheet No. 10.0-8.

Electronik 1/2-second recorder

Features pen speed of only one-half second for full 11-inch chart travel. Ideal for recording rapidly changing variables. Chart speeds as fast as 4" per second are available. Improved velocity damping prevents overshoot.

For information, write for Data Sheet No. 10.0-13.

Electronik adjustable span recorder

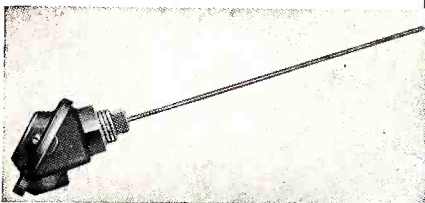
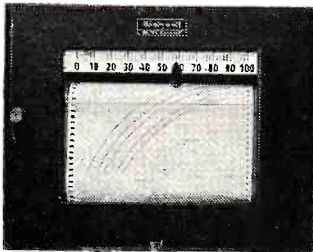
The instrument of a hundred ranges. Span is adjustable from 1 to 50 millivolts. Zero can be shifted by plus or minus 100 percent of the maximum span. All adjustments are readily made by means of calibrated dials on the front of the instrument.

For information, write for Data Sheet No. 10.0-10.

accessories

Among the instrument accessories specifically useful for research work are special purpose thermocouples . . . pencil, button, skin, probe and molten metal types . . . and precisely calibrated bare thermocouple wire in a choice of gages. Thermocouple extension wire is available in a selection of insulations to cover varying requirements for ambient temperature, abrasion and moisture resistance.

For information, write for Catalog No. 100-4.



... to speed your research

components

converters

Convert low power d-c signals to 60 or 400 cycle alternating voltages. Unaffected by atmospheric pressure changes. Designed for extremely low thermal emf, and thoroughly shielded against electromagnetic and electrostatic pickup. Particularly useful in null detection or error voltage measurements.

Electrical Characteristics of 400 cycle Converters

(60-cycle converters similar except as noted)

Driving Coil Input: 18 volts, 94 milliamperes, 400 cycles (within 10%). (60-cycle model: 6.3 volts, 60 ma.)

Contact Rating: SPDT switching. Nominal rating 6 volts to 1 microvolt, 1.0 milliampere, maximum power, 1000 microwatts.

Symmetry: Within 5%.

Load Characteristics: Resistive or inductive.

Shielding: Shell and coiled shield grounded.

Vibration Resistance: Output voltage varies less than 2% under accelerations up to 10 g.

Phase Shift: 45 to 50 degrees between output voltage and driving voltage. (60-cycle model: approx. 17° lag.)

Stray Pick-up: Electrostatic: 2×10^{-10} volts per ohm of input circuit impedance; Electromagnetic: 2×10^{-5} volts, constant to 2×10^6 volts.

For further information, send for Data Sheets No. 10.20-1 and 10.20-5.

servo amplifier systems

Comprises a converter (if the signal to be detected or measured is d-c); amplifier; and balancing motor. Ideal for null detection and correction of error signals.

Amplifier No.	Input Impedance Ohms	Sensitivity Volts	Over-all Voltage Gain	60-Cycle Output Current	60-Cycle Output Voltage
351921	400	2×10^{-6}	10^6	0-12 ma.	0-154
354547	7000	0.5×10^{-6}	4×10^6	0-12 ma.	0-154
351921*	3000	0.05×10^{-6}	40×10^6	0-12 ma.	0-154

*This amplifier has an added stage of amplification, with special features to eliminate spurious signals resulting from thermal emf's and stray a-c pick-up.

For further information, send for Data Sheets No. 10.20-3 and 10.20-4.

Brown 60-cycle balancing motor

Totally enclosed and self-lubricated; provide positive positioning. Nominal characteristics:

	27 RPM MOTOR	54 RPM MOTOR	162 RPM MOTOR	333 RPM MOTOR
MAXIMUM TORQUE	85 inch ounces	43 inch ounces	19 inch ounces	4-5 inch ounces
MAXIMUM POWER	6500 inch ounces per min. at 17-18 rpm.	6700 inch ounces per min. at 30-32 rpm.	8150 inch ounces per min. at 100 rpm.	8750 inch ounces at 190 rpm.
POWER REQUIREMENTS	Line field—9.5 watts. Amplifier field—4 watts.			

For further information, send for Data Sheet No. 10.20-2.

THESE products . . . and the many other *ElectroniK* instruments, Brown Electronic Components and special primary elements . . . are accelerating countless research projects.

Your own research program, too, can benefit from the versatility and precision of Brown instrumentation. Your inquiry is invited.

MINNEAPOLIS-HONEYWELL REGULATOR Co., *Industrial Division*, 4578 Wayne Ave., Philadelphia 44, Pa.

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BROWN INSTRUMENTS

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Wire

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A very friendly bond of close cooperation exists between our users and us. Customer satisfaction is our prime consideration.

Production is efficient and quality control is rigid. The finest materials are used in the manufacture of all our products. We offer wires for every application.

Our research and development engineers are always ready to assist you with your problems on design and application for any special purpose in television, radio, telephone and other industries.

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INTERCOMMUNICATION WIRES



TV WIRES



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- Quality manufacture of pulse transformers.
- Magnetic memory units.
- Design and production of magnetic amplifiers.

The manufacture of coils must be founded upon a precise engineering base and precise engineering controls for quality mass production.

For 30 years Sickles has specialized in the design and manufacture of coils and coil assemblies. Now Sickles' vast experience and special skills are being applied to the techniques of components which require toroidally wound constructions.

To your problems Sickles brings unexcelled engineering and production techniques, extensive fabrication facilities, unusually complete instrumentation and test equipment, unique and high technical abilities.

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ELECTRONIC



PARTS

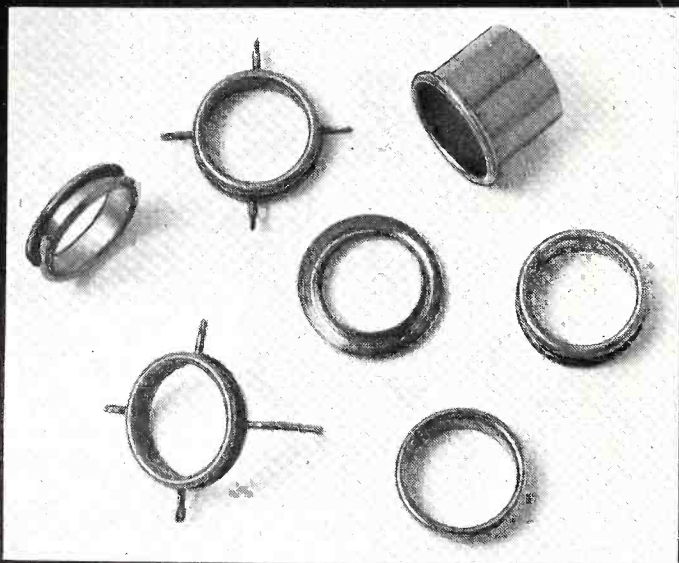
Preferred Electronic

TV Gun Parts

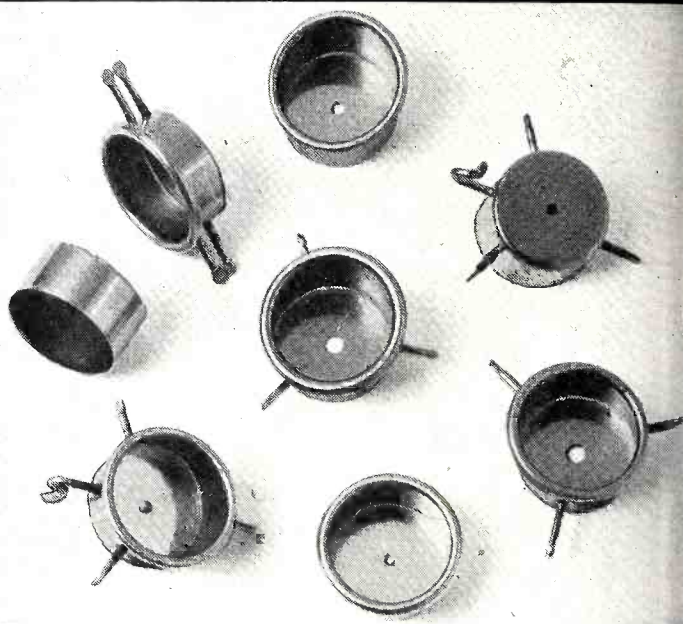
MAGNETIC	-	ELECTRO-STATIC
IMF	and	COLOR
CERAMIC	or	GLASS POST DESIGN

Announcing a complete line of CATHODE RAY TUBE GUN PARTS to meet all Industry requirements and applications.

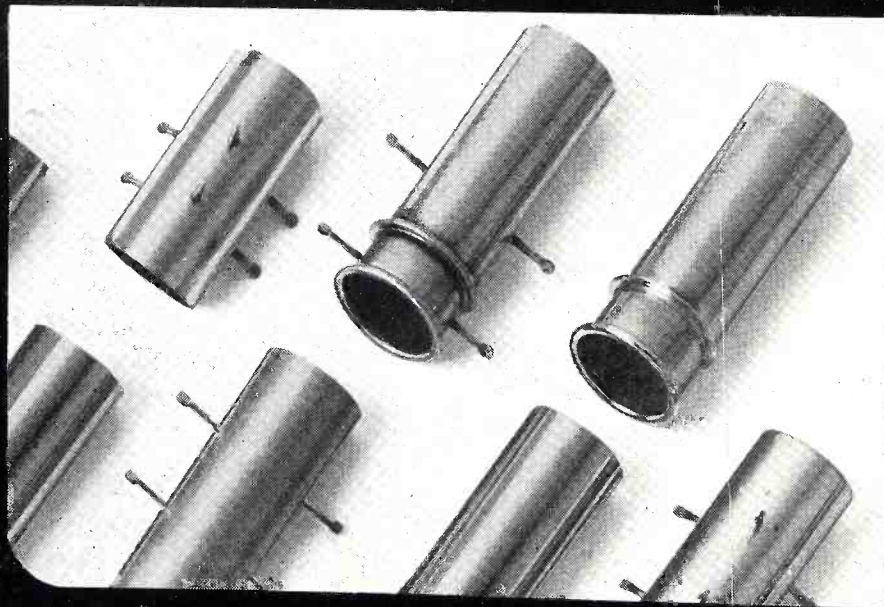
MINIATURE and SUB-MINIATURE TUBE PARTS. SPECIAL METAL and MICA STAMPINGS



FOCUS ANODES FOR ELECTROSTATIC FOCUS GUNS • Available with or without Pins and Support Connector.



NO. 2 GRIDS and PINNED NO. 2 GRID ASSEMBLIES

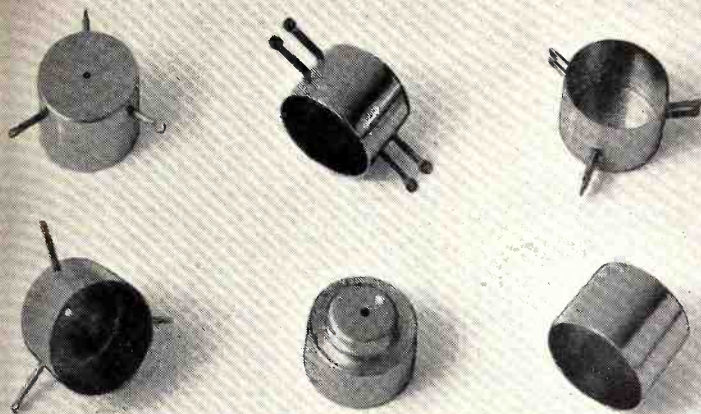


TUBE SOCKET TERMINAL CONTACTS
Produced from brass, phosphor bronze, beryllium copper, Inconel and steel.

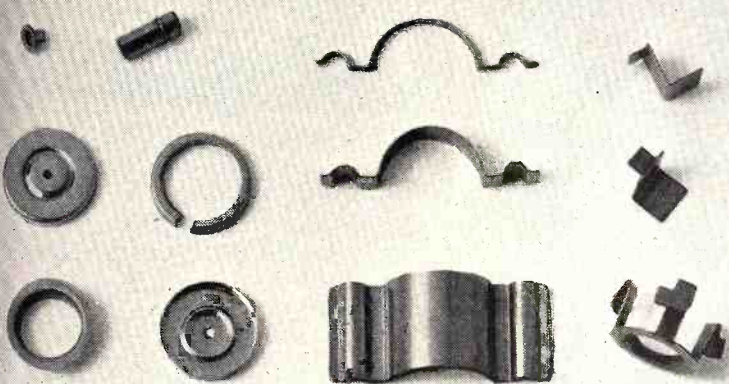
ANODE CYLINDERS and PINNED ANODE ASSEMBLIES

ELECTRONIC AND MECHANICAL ENGINEERING CONSULTING SERVICE AVAILABLE

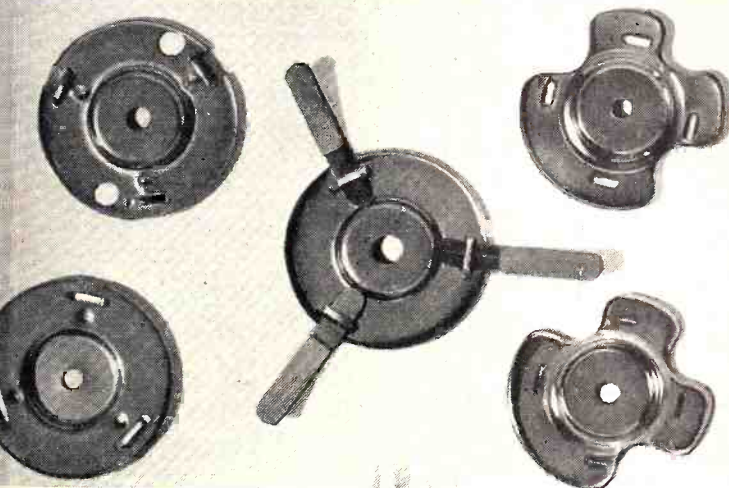
Parts · Components by J & H



NO. 1 GRIDS and PINNED NO. 1 GRID ASSEMBLIES



ONE PIECE CATHODES, STEM LEAD EYELETS, APERTURE CUPS, CATHODE RETAINERS, CATHODE SPACERS, POLE PIECES, SUPPORT STRAPS.



TOP APERTURE SPACERS FOR MAGNETIC AND ELECTROSTATIC FOCUS GUNS

Illustrated are typical examples of our wide range of parts and assemblies specified by leading Gun and Tube manufacturers for conventional and advanced Cathode Ray Tube designs.

J & H Seamless Anodes and Grids are produced on precision deep drawing machines from high quality strip material — entirely free of contaminant lodging seams and crevices. Parts are deburred and finished by our exclusive processing procedures to the highest degree of surface lustre and uniformity.

A three fold expansion in manufacturing area together with greatly expanded modern production facilities enables us as a completely independent supplier to quickly provide you with the highest quality parts either from our extensive line of standard designs or special parts engineered and designed to your requirements.

Our completely equipped tool and die shop in conjunction with high speed automatic production facilities together with our new parts assembly section is prepared to undertake your most exacting and critical parts and component problems from design to completed product.

As a supplier to some of the foremost government defense contractors we are experienced in the production of highly precise parts and stampings used by the armed services for electronics and other specialized applications.

Investigate J & H facilities for your standard or special parts requirements today. Profit by the economy of quality parts engineering and manufacturing.



ELECTRONIC



PARTS

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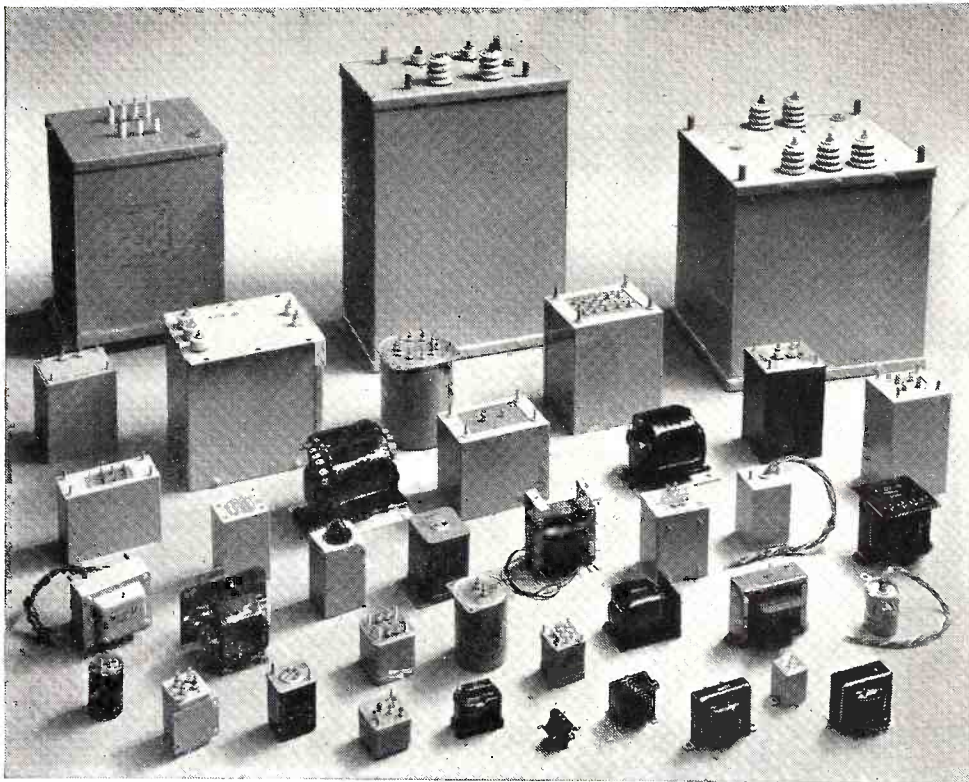
Telephone GARDEN City 3-4840

ELECTRONIC AND MECHANICAL ENGINEERING CONSULTING SERVICE AVAILABLE

Langevin...

TRANSFORMERS

- ▶ to military specifications
- ▶ for your special performance requirements



You are sure of prompt service from Langevin, because

1. We have on hand, at all times, hundreds of types and sizes of wire, core materials, cases, terminals, brackets — everything needed to build all kinds of special transformers.
2. Your samples and short runs are handled in our model shop, manned and equipped for high-speed service.
3. Complete MIL-T-27 tests for qualification approval can be made in our own laboratory. This often hastens your contract completion by many weeks.

Depend on Langevin for pulse transformers, charging reactors, saturable reactors, hi-cycle transformers, and units built to the most rigid specifications.

IMMEDIATE REPLIES ON QUOTATION REQUESTS

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MANUFACTURING
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New Portable Battery-Operated Spring-Motor Tape Recorder



The Magnemite

For all field recording without AC power. Smaller and lighter than a portable typewriter, the Magnemite* actually makes field recordings that can be played on any studio console equipment. Completely self-powered, the Magnemite* does away with bulky and cumbersome generator storage batteries and rechargers.

Just check these unusual features:

- Noiseless and vibrationless governor-controlled spring-motor assures constant tape speed.
- 100 operating hours per set of inexpensive flashlight-type dry cell batteries.
- Earphone monitoring while recording, and earphone playback for immediate quality check.
- Operates in any position, and is unaffected by movement or vibration during operation.
- Warning indicator tells when to rewind and shows when amplifier is on.
- Broadcast models weigh 15 pounds. Slow speed models weigh only 10 pounds.
- Requires no more desk space than a letter head, measuring only 11 x 8½ x 5½ inches.

There's a choice of 5 different models for any recording need. High fidelity units meeting primary and secondary NARTB standards, which record and play back frequencies up to 15,000 cycles, are available for broadcast stations, critical music lovers, and scientific research. For investigation, missionaries, reporters, and general dictation while traveling, there are units which play up to 2 hours per reel of tape.

Write Dept. 112 for complete descriptive literature and direct factory prices.

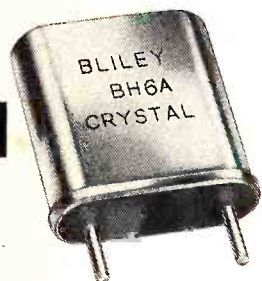


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Military types CR15, CR16, CR18, CR19, CR23, CR24, CR27, CR32, CR36, CR47 are representative of current production by Bliley. Complete range of types and cross reference index is given in Bulletin 43.

MILITARY



SHIP-TO-SHORE



Types MC7, SR5 and SR8 are suggested for shipboard dependability. Price and details given in Bulletin 44.

BROADCAST



Types BC46T, MO3B, TC92 are first choice for automatic temperature control in AM, FM and TV transmitters. Consult Bulletin 43 for basic details.

SPECIAL PURPOSE



Types SR10 and MC9 provide wide range frequency choice for TV service, diathermy and citizens band. Request Bulletin 44 for price and description.

COMMUNICATIONS



Type BH6A is the predominant choice for land mobile and airborne applications. Consult Bulletin 43 for basic information.

STANDARD



Types KV3, MC9, SMC100 and MS433 cover reference frequencies from 100 kc through 10.7 mc. Price and "stock tolerances" given in Bulletin 44.

AMATEUR



Types AX2 and AX3 together with Bliley packaged oscillator Model CCO-2A were designed to bring precision and price together in the Ham Bands. Price and details are given in Bulletin 44.

ULTRASONIC DELAY LINES



Custom built fused quartz delay lines provide high stability and precision time intervals for manipulation of pulsed or pulse modulated signals. Consult Bulletin 45 for technical information.

FREQUENCY STANDARDS



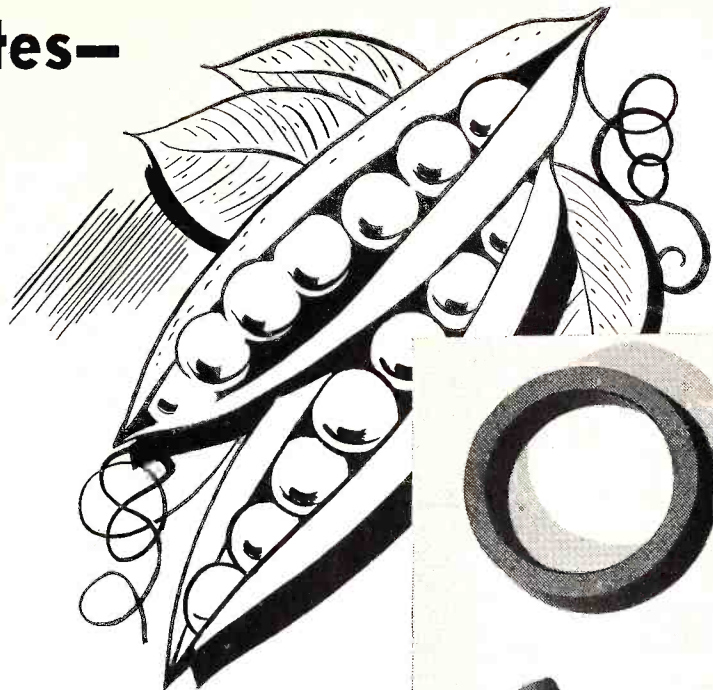
Model BCS-1A is a high stability instrument for precision reference at 100 kc. Ideal choice for research and development laboratories. Descriptive information given in Bulletin 43.



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alike
than
peas
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a
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You'll find Moldite Ferricores will give you lower losses, greater efficiency, higher permeability . . . and **LOWER COST!**

**FERRITE CORES
MOLDED COIL FORMS
(iron and phenolic)
MAGNETIC IRON CORES
FILTER CORES
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Samples promptly submitted upon request for design, pre-production, and test purposes

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Moldite has also resumed production of Molded Coil Forms. You'll find everything fully described in our new catalog. Send for a copy... NOW. And, at the same time, request samples for design, pre-production and test purposes.

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PULSE CAPACITORS

25 to 100 KV 50 Megawatts

Designed for extremely low temperature rise when used in pulse-forming networks above 25,000 volts. Can pass 2500 amperes at 0.0005 duty cycle.



Catalog No.	Mfd.	Peak KV	Body dimensions (inches)
GPC-601672	0.0167	60	8x8x24 3/4 H.
KPC-401252	0.0125	40	5x6x24 H.
APC-401672	0.0167	40	5x6x24 H.
RPC-402509	0.0250	40	6x7x24 3/8 H.
APC-357501	0.0075	35	5x7x8 3/8 H.

PULSE-FORMING NETWORKS

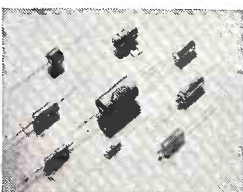
Any pulse width from 0.1 to 40 microseconds. Any impedance from 5 to 500 ohms. Any voltage rating from 1000 to 25,000 volts. Write for data sheet.



GLASS-TERMINAL TUBULAR CAPACITORS

midget • metal-cased hermetically sealed

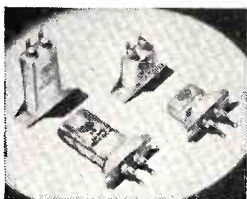
Metallized-paper types in ratings of 0.01 to 10 mfd, voltage ratings from 150 to 600 volts d-c, and temperature ranges of -55 to +85C with mineral-wax or mineral-oil impregnation and -55 to +105C with silicone-fluid impregnation. Foil-paper types are rated



0.001 to 1.0 mfd; with silicone-fluid impregnation, they operate at 200-1000 volts d-c from -55 to +125C; with mineral-oil impregnation, they operate from -55 to +85C. Write for catalog giving complete list of sizes.

JAN-C-25 CAPACITORS

Types CP53, CP54, CP55, CP61, CP63, CP65, CP67, CP69, and CP70. Write for catalog giving complete listing of capacitances, voltages, dimensions, and mounting styles.

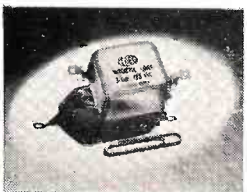


RADIO INTERFERENCE FILTERS

We manufacture radio interference filters in all sizes, ratings, and styles. A few popular items are listed below; for special requirements, utilize Tobe's unequalled experience and facilities in the field in which, as early as 1929, this company was known as "the pioneer and recognized authority"

SUB-MINIATURE WIDE-RANGE

Filterette No. 1561-A . . . weighs only one ounce; in case only 1 1/8 x 1 x 11/16 inch; handles 3 amperes at 0-400 cps; provides better than 40 db attenuation from 0.150 to 400 megacycles.



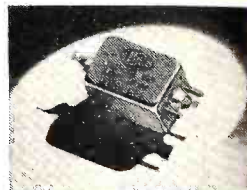
MINIATURE • 20-AMPERE

Filterette No. 1547 . . . gives better than 86 db attenuation through most of the 0.150 to 1000 megacycle range; hermetically sealed in case 2 x 2 x 1 3/16 inches; operates at 500 volts d-c or 130 volts a-c to 1700 cps; meets military specifications for use from -55 to +105C.



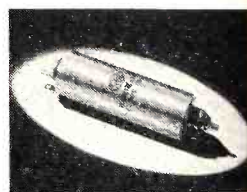
MINIATURE • 5-AMPERE

Filterette No. 1558 . . . specially designed for aircraft service; hermetically sealed case only 1 1/4 x 1 1/8 x 1 3/4 inches; attenuation above 86 db from 0.6 to 30 megacycles; operates at 130 volts, 0-1000 cps; designed for bulkhead mounting.



FEED-THRU POWER-LINE FILTER

Filterette No. 1600 . . . uses the efficient feed-thru construction originated by Tobe to provide high attenuation over a broad frequency band; carries 10 amperes at 125 volts, 0-1000 cps; hermetically sealed in metal case 3 1/4 inches long by 1 1/8 inches in diameter; threaded bushing for single-hole mounting.



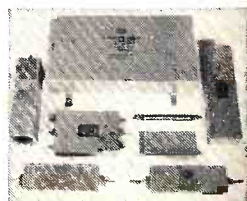
FILTER PACKS

Multi-circuit filter packs combine, in a single, compact housing, all the elements needed to suppress radio interference in many separate circuits. Designed and built to your circuit requirements, Tobe Filter Packs provide better miniaturization than individual filters, and reduce the space to be pressurized, with no sacrifice in filter performance. Call on us for recommendations in your early design stages — where we can do the most to help you.



SCREEN-BOOTH FILTERS

Used throughout industry to keep radio interference out of shielded areas. Handle high current with negligible voltage drop. Designed for easy installation in conformity with correct electric wiring practices.



Cat. No.	Amps.	Volts		Case sizes — inches		
		D.C.	A.C.	H.	W.	L.
1217	10-15	250	250	1 11/16	3 3/8	8 5/16
1137-AC	25	600	220	2 9/16	4 3/4	15 7/16
1180-2	100	500	500	3 11/16	3 5/8	12 5/8
1182-B	100	500	500	4 5/8	11 5/8	22 5/16
1457-1	100	500	500	7/8 diameter		1-3/16

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CORPORATION
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Kay-Lab ELECTRONIC INSTRUMENTS

set new standards of accuracy and performance to solve your research and production problems

You'll discover newer, better, easier ways to solve your electronic research and production problems when you use Kay-Lab precision electronic and electro-mechanical instruments. Join the leading research laboratories, manufacturers, government agencies, and universities which depend on Kalbfell Laboratories for the finest instruments and for complete, competent engineering and research service.

Kay-Lab MICRO-MIKER

The Dynamic Micro-Miker measures capacitance and inductance under OPERATING CONDITIONS. Voltage at test lead does not overload amplifier stage and total inter-electrode capacity (including Miller Effect) and stray capacity may be measured. Used in design of video amplifiers, vacuum tube studies, wiring capacity measurement, manufacture of delay lines, and in all other jobs where dynamic or small capacities are significant. Features Kay-Lab etched circuit construction. Capacity range — .1 to 1000 MMFD $\pm 1\%$. Inductance range — 1 to 240 Microhenries.



Kay-Lab LOGATENS

These are non-linear attenuating networks whose output voltage amplitude is a linear function of the logarithm of input voltage. Several models available, allowing for dynamic range of 60 DB and accuracy of 0.5 DB. Used for computer applications, dynamic compression, radar, sonar, or any other applications of signal compression or logarithmic conversion.

Kay-Lab PLUG-IN AMPLIFIERS

These units are designed primarily for use with Kay-Lab Logatens. Three standard models available: (1) PRE-AMPLIFIER, high impedance input, 60 DB gain; (2) DRIVER AMPLIFIER will produce 10 volts amplitude across Logaten's input; and (3) DETECTOR AMPLIFIER capable of producing 10 volts output with .1 volt input. All units are stabilized with negative feedback and have response flat within 1 DB from 5 cycles to 50 KC.

Kay-Lab DECADE AMPLIFIER



This general purpose pre-amplifier has stabilized gains of 40 DB and 60 DB, and maximum gain of 80 DB. Amplifier response is flat from 1 cycle to 1 megacycle. Capable of producing 40 volt RMS output into a 5000-ohm load or 10 ma. current into low impedance load. Hum and noise on all ranges is below 20 millivolts. Kay-Lab etched board wiring technique featured.

Kay-Lab .01% STABLE ABSOLUTE DC POWER SUPPLIES

These high powered standard cells are absolute sources of DC voltage, independent of output load and supply voltage variation. They feature long time drift stability and absolute output voltage calibration of .01%. A unique circuit is used whereby output is compared with a standard cell, which insures absolute stability and calibration. Units are available in wide range of voltage and output current from a few milliamps to 12 amperes. The packaged sub-assembly design is easily adapted to special requirements. Various standard models are available for operation in the 0 to 600 volt range and from 140 milliamps to 12 amperes. Constant current models available.



Kay-Lab SUPER-REGULATOR SYSTEM

This provides the ultimate in power supply output impedance and hum noise level and was designed to convert ordinary power supplies into precision laboratory instruments. It has a DC output impedance of .005 ohms and output hum and noise less than 50 microvolts.

Kay-Lab CHOPPER STABILIZER

Affords standard cell stability and accuracy to output voltage of any ordinary regulated power supply. Can be used directly with Kay-Lab Super-Regulator. Maintains the absolute calibration of power supply output to within .01%, and stabilizes output drift to a few parts per million.

OTHER Kay-Lab PRODUCTS

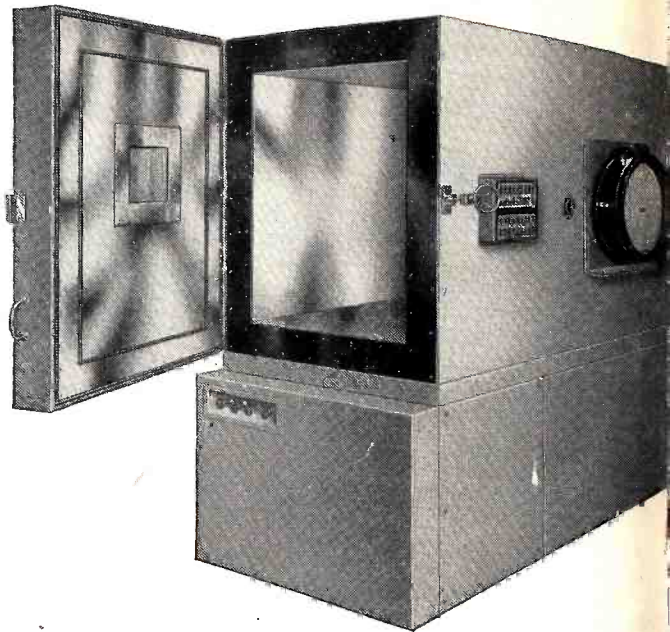
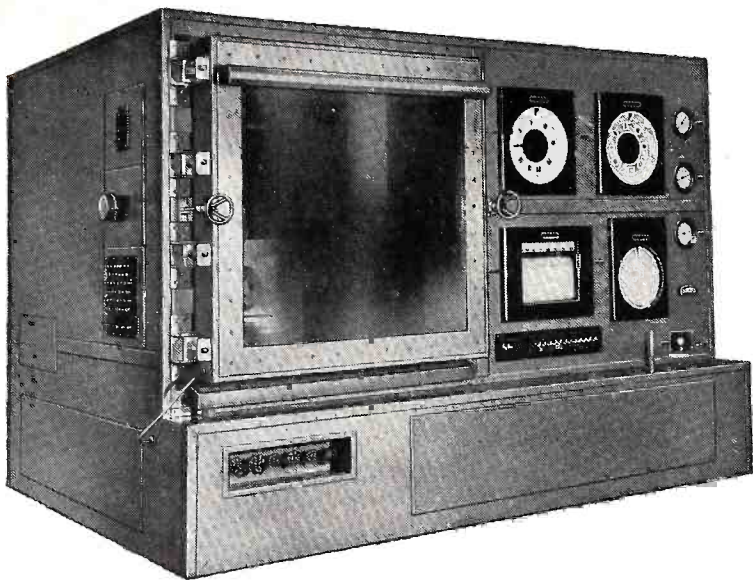
- TWIN-T-FILTERS — complete line of rejection type filters — from .01 to 1,000 cycles — immediately available from stock.
- METER CALIBRATION UNIT — precision standard source of DC voltage and current for meter calibration and reference.
- SPECIAL FILTERS — complete engineering facilities for custom low pass, high pass, and band pass filter manufacture.
- PEAKED AMPLIFIERS — selective frequency high Q amplifiers, from .01 cycles to 1 KC.
- SERVO STABILIZER — plug-in unit with variable rate control for stabilizing AC servo systems.
- ELECTRONIC THERMOSTAT — amplifier and relay system for more exact temperature control of Logatens and other devices.
- LOGARITHMIC TIME BASE — converts linear oscilloscope time base to logarithmic system.
- HIGH POWER AMPLIFIER — high power amplifier flat from 10 cycles to 1 megacycle with low impedance output.
- DIGITAL ATTENUATOR — servo positioned potentiometer system for use with analogue computers.
- DIGITAL VOLTMETER — analogue to digital converter displaying continuous voltage in absolute digits.

Write for name of your nearest representative.
 Technical bulletins available for all products. Write for free catalog.

Kay-Lab PRECISION ELECTRONIC INSTRUMENTS

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 Post Office Box 1578 Telephone: Woodcrest 6359

Environmental Test Equipment

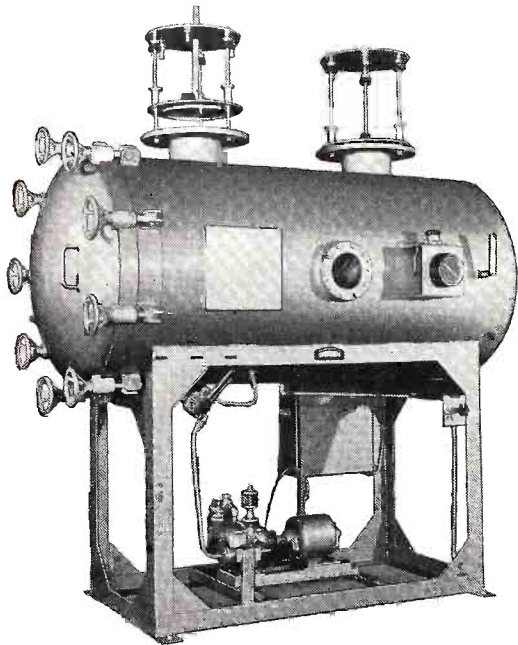


L-SERIES

Laboratory Unit for complete environmental testing of aircraft instruments and equipment at a temperature range from +185°F. to -100°F., relative humidity simulation from 20% to 95%, and altitude from ambient atmospheric pressure to 80,000 feet or higher.

S-SERIES

These units will automatically maintain temperature conditions within a range from -85°F. to +185°F. In addition, units which incorporate humidity conditions will provide humidity from 20% to 95% between +35°F. and +180°F. Dry and wet bulb temperature ranges can be extended to meet other requirements.



EXPLOSION

Explosion chamber to meet all MIL, JAN, USAF, AN, and other specifications for testing of instruments and equipment in explosive atmosphere at altitudes up to 50,000 feet. Unlimited altitude simulation available. Bowser ignition system (Patent applied for) and safety devices, plus automatic fuel metering are typical features of this chamber.

Special Engineering

Bowser Technical Refrigeration maintains a complete engineering staff to solve special test problems for the aircraft industry. All test chambers can be furnished with power drives into the test chamber. Also available as accessories are test racks to special design, optical viewing arrangements, pressurized and explosion proof connectors, special high voltage in- and outlets, radio shielding and connections for testing hydraulic equipment. To meet individual requirements, other special instrumentation, accessories and sizes are available.



SAND & DUST

Sand and dust chamber to meet all MIL, JAN, USAF, AN, and other test specifications for aircraft and electronic components. Provides testing facilities in air-suspended sand and dust at air velocities of 100 and 2300 feet per minute. Accurate temperature control of the air is provided by automatic heating and refrigeration equipment. Electronic density indication and control are available.

BOWSER

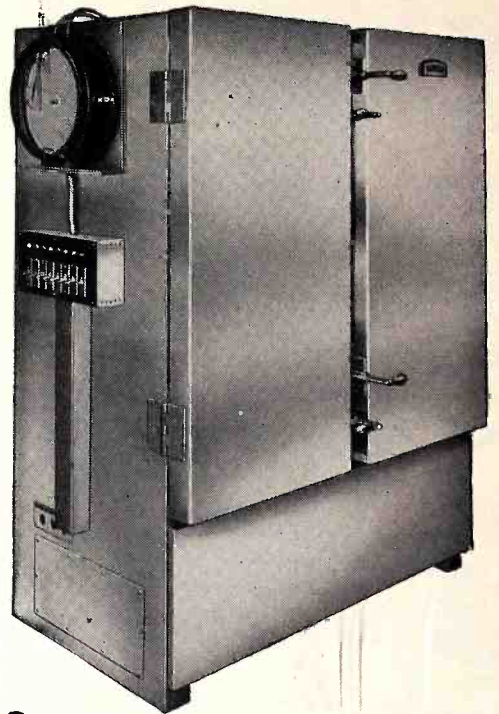
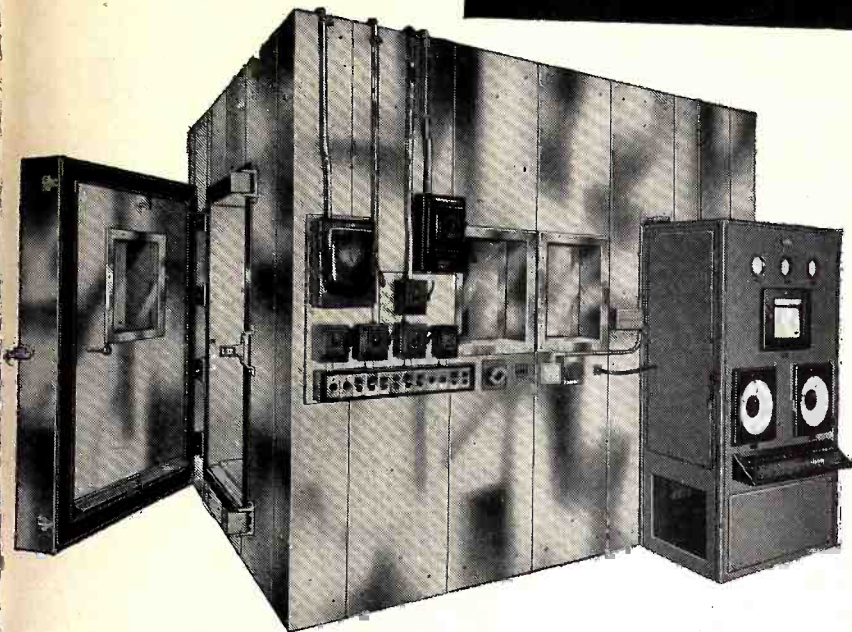
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Environmental Test Equipment



WALK-IN ROOMS

Bowser Walk-In Rooms are available with UNLIMITED altitude simulation, temperature range from -100° to $+200^{\circ}\text{F.}$, and relative humidity from 20% to 95%. With sectionalized panel construction any size or shape room can be manufactured for field assembly in the field. Smaller sizes are preassembled at the factory. Special accessories and instrumentation can be engineered and installed to individual specifications.

H-SERIES

Relative Humidity Simulation Unit which will automatically maintain humidity conditions from 20% to 95% at temperatures from $+35^{\circ}\text{F.}$ to $+185^{\circ}\text{F.}$ (Dry Bulb).



T-SERIES

The new Units are ideal for all types of processing requiring extraction of heat. The wide range of temperatures down to -100°F. and lower also allows complete testing of products under conditions of extreme cold. In addition, storage of products is particularly effective because of the close control tolerance and dependability featured in all Bowser units. Other applications for which these units are well suited are stabilization of metals, aging of metals, expansion fitting, conditioning for tensile tests etc.

U-SERIES

These units are designed specifically for production processing of aircraft instruments, accessories and equipment. Temperature ranges from $+158^{\circ}\text{F.}$ to -80°F. Relative humidity simulation from 20% to 95% and altitude simulation to 55,000 feet are provided.

Write for more information NOW

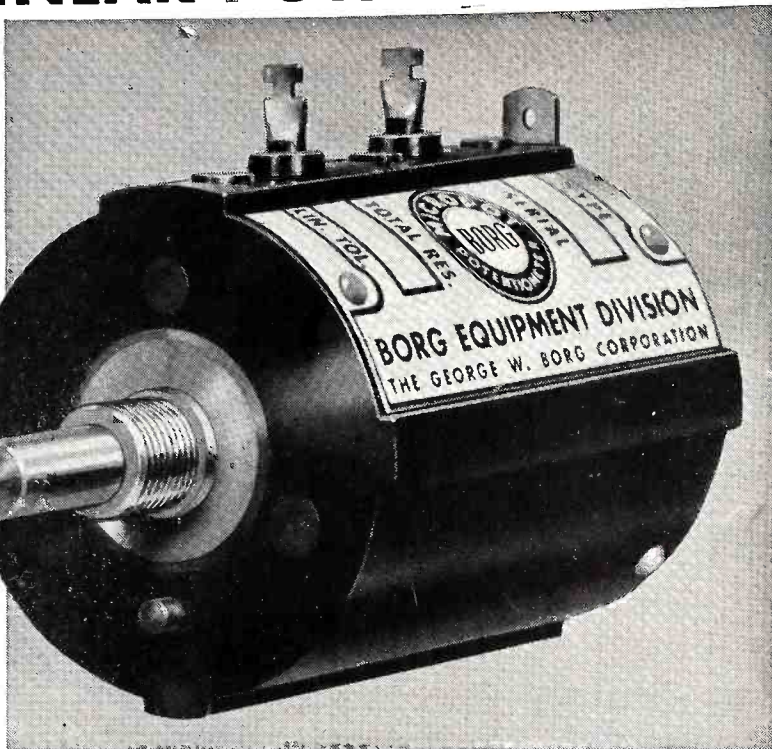
BOWSER

TECHNICAL REFRIGERATION

DIVISION BOWSER INC.

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THE HIGH-PRECISION LINEAR POTENTIOMETER

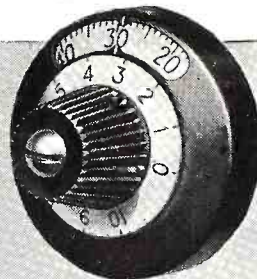


MICROPOT precision ten-turn potentiometer

BORG MICROPOT TEN-TURN POTENTIOMETER: Built to fit the specifications of control system engineers and designers . . . constructed with Micro accuracy for precise voltage adjustments . . . featuring an assembly scientifically designed, machined, assembled and automatically machine tested for linearity of $\pm 0.1\%$ and 0.05% , zero-based. MICROPOTS ARE AVAILABLE IN 1.15 to 3 OHM and 30 to 250,000 OHM RANGES FOR IMMEDIATE SHIPMENT.

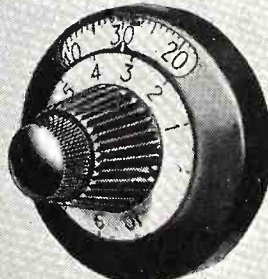
BORG MICRODIAL: Two concentrically mounted dials: one for counting increments of each turn and the other for counting turns . . . delivered completely assembled with dials synchronized. Outstanding features include smooth, uniform action . . . no backlash between incremental dial and potentiometer contact . . . less wear, only one moving part aside from the two dials . . . contact position indicated to an indexed accuracy of 1 part in 1,000.

MICROPOT—MICRODIAL CATALOG SENT PROMPTLY ON REQUEST



**BORG
MICRODIAL
746-A**

A precision ten-turn indicating dial assembly. Has screw locking device on operating knob.



**BORG
MICRODIAL
746-B**

Same as 746-A but has knurled locking screw mounted externally to operating knob.

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Kaupp provides design and project engineers an economical and quick method of obtaining short run development pieces. Punch and nest ring are the only tools required... rubber diaphragm backed by hydraulic oil acts as the die member of the tool. Perfect surfaces are assured. Less time is consumed in tool making, therefore tooling costs are considerably lower. Contact us on your next short run order... hydroforming by Kaupp will save you time and money!



Punch and nest ring are the only tool requirements as hydraulic oil functions as the die member.

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precision electronic instruments by DeJUR



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- 3 1/2" A.S.A. Meter meets MIL-M-6A. Model S312
- 1 1/2" Meter. Conserves space. Built to SC-73-3. Model 112
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- 3" Diameter 11 watt JAN-R-19 Const. Model 275
- Dual Concentric Model 282
- 3" Diameter 8 watt JAN-R-19 Const. Model 260
- Non-Linear Card C200
- Sine-Cosine Card C200

Actual performance records prove that these DeJUR components withstand adverse conditions of vibration, heat and moisture. Each is engineered and manufactured to meet rigid government requirements. In addition to its wide variety of stock instruments, DeJUR offers top-flight laboratory, engineering and manufacturing facilities for production of these precision units adapted to your specifications. Inquiries are invited.

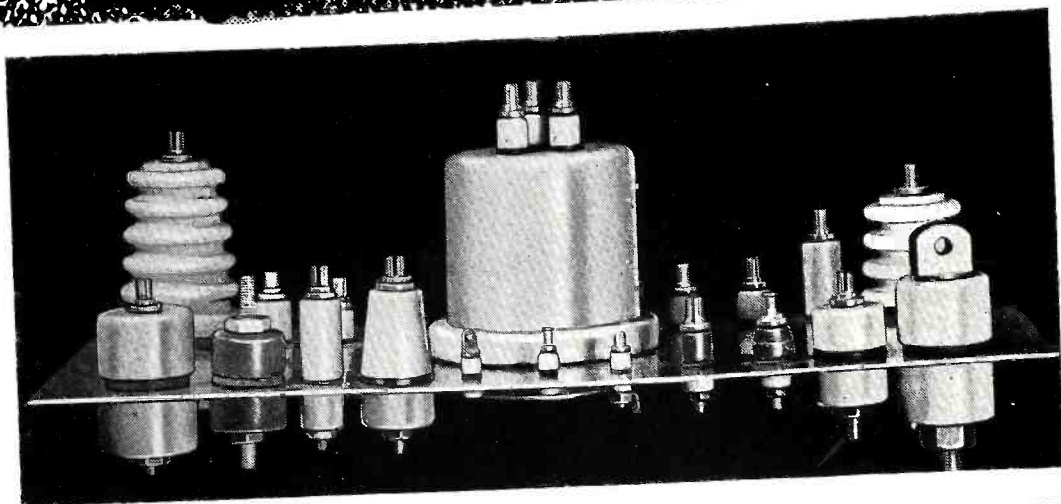
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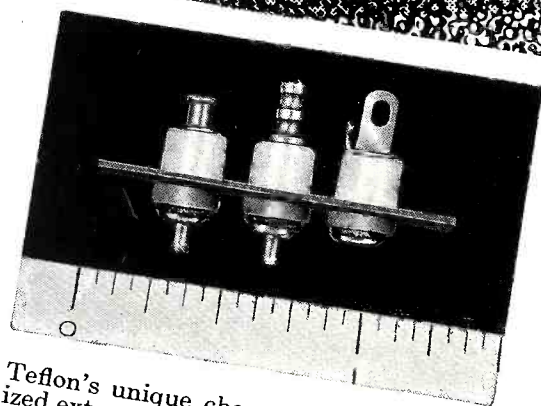
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LUNDEY TERMINALS

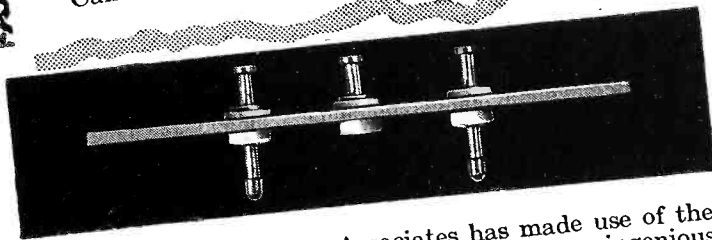


These are ceramic, compression-type terminals, with neoprene or silicone rubber as the sealing member. Single conductor terminals are available with diameters from $\frac{1}{4}$ " to $1\frac{1}{8}$ ", working voltages from 1000 to 15,000 V, and current ratings up to 400 amperes. Multiconductor assemblies are available in several types. This group will cover a wide range of electronic applications.

Lundey Terminals are constantly increasing in use because they give freedom from surface tracking, excellent resistance to thermal and mechanical shock, high voltage and current ratings and top performance under military specifications. Lundey Associates are constantly working with new materials, well as improving existing materials, to provide better sealing of gases, vapors and chemical compositions. Temperature and pressure ranges are constantly being improved. Factory and field engineering facilities are available to the client whether standard or special designs are involved. Lundey Associates stands ready to produce necessary special designs to meet the particular specifications of the purchaser. The Lundey Associates catalog includes complete specifications of the standard line of terminals. Field representatives are located throughout the United States and in the Toronto-Montreal area in Canada.



Teflon's unique characteristics are utilized externally to produce these superior properties: assembly by simple tooling in a drilled or punched hole — no extrusion needed; high resistance — no extrusion resistance stability during temperature changes; humidity-resistant; effective spring loading; miniature size, with a mounting distance of $1\frac{5}{64}$ " on centers. Silicone or neoprene rubber is used internally to give an hermetic seal which meets MIL-T-27 specifications. Current rating is 8 amperes. Three electrode styles are available.



In this terminal, Lundey Associates has made use of the unique properties of Teflon coupled with an ingenious construction to produce a terminal for use in the UHF region. The terminal has high RF insulation resistance and low capacitance. This group is available in either feed-thru or stand-off types.

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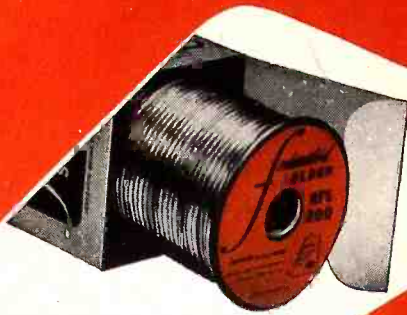
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Federated Metals' new RTS 200 rosin core solder has proved in production operations to be 5 ways better than ordinary rosin solders:

30% GREATER SPREAD—by test the spread of RTS 200 is 30% greater than that of conventional rosin core solders.

4 TIMES FASTER OXIDE PENETRATION—oxide films and corrosion products on the parts you are soldering need not slow down operations. RTS 200 pierces these retarding agents 4 times faster than ordinary solders.

NON-CORROSIVE—despite the exceptional activity of the RTS 200 flux at soldering temperatures, there is *no harmful corrosive residue* when tested under the high humidity conditions of military specification MIL-S-6872.

NON-TOXIC—the chemicals used in RTS 200 flux are commonly used in industry and have no toxicity factor whatsoever.

STABLE FLUX—experience of over one year with the type flux used in RTS 200 shows that it is just as active after standing as when used immediately. If you store RTS 200 for extended periods, you need not worry about its stability, as you do with ordinary solders.

Try this new, industry-tested active solder *today*. Available in a variety of wire sizes, compositions and quantities. For information see your distributor or write any one of Federated's 14 plants or 22 sales offices across the nation. There is one near you.

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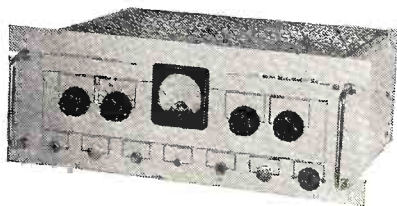
MAGNETIC RECORDING:

Multichannel Communication Recorders

ULTRASONIC ENERGY APPLICATIONS:

Hypersonic* Generators and Transducers

*Trade Mark



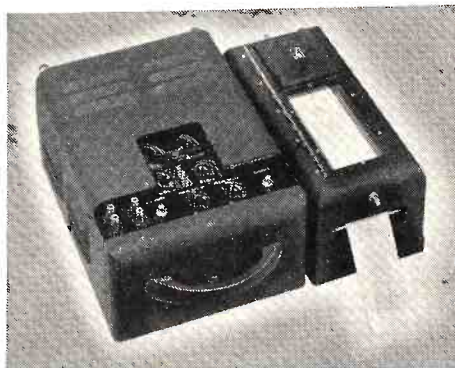
Rack Mounting

A program of redesigning the present line of amplifiers and oscillographs so they may be mounted in standard 19-inch racks is now under way. The unit above is the BL-962 Rack Mounting D. C. Amplifier.

ACOUSTIC AND TEST INSTRUMENTS

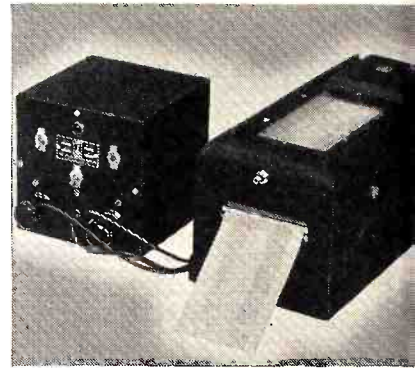
The following instruments are manufactured in Denmark by The Bruel and Kjaer Company and distributed exclusively in the United States and Canada by Brush Electronics Company:

- BL-1012 Beat Frequency Oscillator
- BL-1502 Deviation Test Bridge
- BL-1604 Integration Network for Vibration Pickup BL-4304
- BL-4304 Vibration Pickup
- BL-2105 Frequency Analyzer
- BL-2109 Audio Frequency Spectrometer
- BL-2304 Level Recorder
- BL-2423 Megohmmeter and D.C. Voltmeter
- BL-3423 Megohmmeter High Tension Accessory
- BL-4002 Standing Wave Apparatus
- BL-4111 Condenser Microphone
- BL-4120 Reciprocity Calibration Apparatus and Accessory
- BL-4708 Automatic Frequency Response Tracer



BL-222 Combination Double-Channel Magnetic Oscillograph

Combination Oscillographs retain basic features of Brush direct inking recorders and offer additional feature of optional use of electric stylus for special recording conditions. Heart of oscillograph is magnetic penmotor, reproducing electrical signals in the frequency range from d.c. to 120 cps. Three speed paper drive provided. Adequate for virtually every recording need. A BL-944 Power Supply is furnished with either model.



BL-320 Universal Amplifier

When used with Brush Magnetic Direct Inking Oscillograph, it is a complete package for measurement of strains. Simply operated, producing records which are immediately available and easily interpreted. Records either static or dynamic strains up to 100 and direction as well as magnitude of measured strain can be read from the

BL-206 Six-Channel Magnetic Oscillograph

Consists of six magnetic penmotors mounted in a line, recording on 12"-wide paper. On standard units, a paper speed of either 125 mm/second, 100 mm/second, 50 mm/second or 25 mm/second plus 1/10 of this speed can be provided. Other combinations available on special order. Dimensions: 20" x 17" x 17". Provides excellent recording medium for multiple gage recording, vibration analysis, wind tunnel work, etc. Either A.C. or D.C. Amplifier to fit particular applications. Linear frequency response from d.c. to 100 cps, used with our amplifiers.

BL-932 D. C. Amplifier



Designed for use with Brush Magnetic Direct Inking Oscillograph, also used to make recordings of many types of phenomena heretofore measured only with the aid of complicated intermediate equipment.

Voltage gain is sufficient to give 1 chart mm. deflection per mv. input. Novel design features combined with both plate and heater voltage regulation reduce effects of power line fluctuation. Zero signal drift amounts to not more than 1 chart mm. per hour. Frequency response essentially uniform from d.c. to 100 cycles per second.

Magnetic Recording and Reproducing Equipment

Single and Multichannel Recorders—
Recorders.

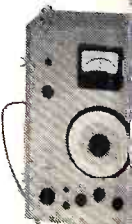
BL-2304 High Speed Level Recorder



Designed for acoustical and electro-acoustical measurements, incorporating a potentiometer controlled moving-coil stylus drive system and a variable speed paper drive.

BL-1012 Beat Frequency Oscillator

An audio signal generator of particular use in conjunction with Level Recorder.



BL-2002 Heterodyne Voltmeter

A high frequency selective vacuum tube voltmeter for range 20 kc to 27 mc, measures both amplitude and modulation. Full scale deflection from microvolts to 10 volts.

BL-1502 and BL-1507 Deviation Test Bridges



For high-speed production checking of resistors, capacitors, inductors. Indicates percentage deviation from standard on large meter with zero point in center. Full scale deflection at 7% and 25%.

BL-4708 Frequency Response Tracer

For analyzing audio frequency response of amplifiers, receivers, loudspeakers, microphones, etc. CR tube synchronized with Beat Frequency Oscillator presents plot of response in db vs. frequency. Audio Oscillator 0-20,000 cps... constant amplitude radio freq. oscillator 1 mc mod. 30%. Oscillograph Component, 50 db range provided through logarithmic amplifier. Trace area 35%

BRUSH COMPONENTS



ACOUSTIC PRODUCTS

Phones

- Model A-206 Headphone
- Model A-1 High fidelity headphones
- Model A Lorgnette phone
- Model A-303 Hushatone® speaker
- Model A General purpose headphones
- Model A Single phone

Brush crystal phones possess the following outstanding features:

1. Bimorph® crystal drive element of such high impedance that line or circuit characteristics are not affected when monitored by Brush phones.
2. Wider range response with more uniform output.
3. Compensation for ear coupling.
4. Light-weight, rugged, shock-proof construction.

Microphones

- Model A-109 Microphone
- Model A-106 Microphone
- Model A-1 Vibromike® contact-type microphone
- Model A-2 Lapel microphone

Other

- Model A-20 Crystal Cutter

PIEZO-ELECTRIC ELEMENTS for electro-acoustical and electro-mechanical applications: Plates of Rochelle salt; Ammonium Dihydrogen Phosphate (ADP); Lithium Sulphate; Barium Titanate (Brush Ceramics A & B); Potassium Tartrate (DKT); Cylinders, curved plates, bowls and other shapes of Barium Titanate (Brush Ceramics A & B); Bimorphs* of Rochelle Salt; Ammonium Dihydrogen Phosphate (ADP); Barium Titanate.



BA-109 Microphone

The Brush Model BA-109 microphone using the improved Acoustical® was created for public address, home recording and amateur applications. The Metalseal® crystal in-maroon plastic and brushed chrome.

- Response from 40 to 10,000 cps.
- Output Level 54 db. below 1 volt/dyne cm².
- Non-directional.
- High Impedance equivalent to approximately .002 mfd. (1.8 meg. ohms at 1,000 cycles.)



Model "A" General Purpose

Designed for GENERAL PURPOSE applications including laboratory, studio and skilled amateur home use. The Bimorph® crystal drive element insures wide range response (100 to 8,000 cps.) and high sensitivity. High impedance; ideal for multiple installations.



BA-206 Headphone

Designed for use where high fidelity and smooth frequency response are of paramount importance. They are especially applicable to broadcast monitoring, to laboratory use in the study of sound measurements, audiometry and similar exacting headphone applications. Features exceptionally flat frequency response. Impedance of 100,000 ohms at 1000 cps; no transformer required. Ideal for multiple installation. Sensitivity is approx. 6.3 dynes/cm/volt at 1000 cps.



BA-106 Microphone

The Brush Model BA-106 is a high quality microphone incorporating the hermetically sealed Acoustical® with sintered bronze damping. Metalseal® crystal is used for protection against conditions of high humidity. This microphone offers unexcelled response in microphones of this type and price range.

Vibration, shock or low frequency wind noise do not affect the performance of this microphone. Output level 50 db. below 1 volt/dyne/cm².

ELECTRO-OPTIC ELEMENTS—Unpolished blanks of Ammonium Dihydrogen Phosphate (ADP); Potassium Dihydrogen Phosphate (KDP) for electro-optic shutters, etc. *Trade Mark

MAGNETIC COMPONENTS

- Single Channel record-reproduce and erase heads
- Multichannel record-reproduce heads
- Miniature record-reproduce heads and erase heads
- Magnetic Rubber Bands



- Model A-1090 Record/Reproduce Head
- Model A-1110 Erase Head

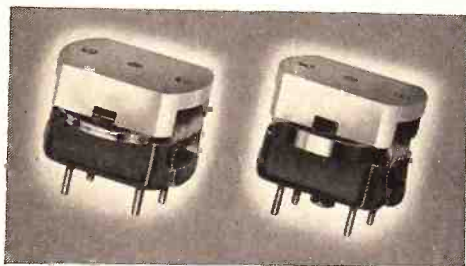
Single-Channel Heads

The new magnetic head is designed for dual-track recording/reproducing on 1/4-inch tape. It features: dimensional stability . . . Mu-metal shielding . . . single-hole mounting . . . high output . . . greatly extended frequency range . . . embedded construction.

* * *

FOR COMPLETE INFORMATION WRITE

Brush Electronics Company, Department K-7
35 Perkins Avenue, Cleveland 14, Ohio.



Cartridge Types

The BK-900 series heads were designed for single-channel recording on any magnetic medium. Available in track widths of 0.014 inch and wider. These heads have precision-lapped gap, synthetic resin dip, balanced magnetic construction, individually wound poles and accurate azimuth alignment.

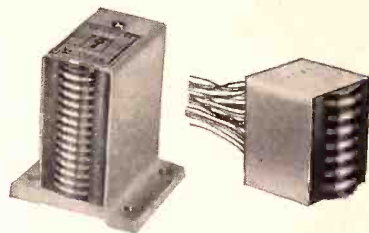


Magnetic Rubber Bands

Magnetic recording bands are made from a special neoprene rubber base that has been pigmented with a high efficiency magnetic recording oxide and lubricated to eliminate wear of head and material.

BRUSH ELECTRONICS

INDUSTRIAL AND RESEARCH INSTRUMENTS
PIEZO-ELECTRIC MATERIALS • ACOUSTIC DEVICES
MAGNETIC RECORDING EQUIPMENT
ULTRASONIC EQUIPMENT



Multichannel Heads

Available in encased assembly or cartridge assembly.

Design Features

- Balanced magnetic structure with gaps at front and rear.
- All gaps in precise alignment.
- Individual channels are cast into one integral block of specially selected synthetic resin.
- Complete assembly is non-microphonic and impervious to moisture.
- Mu-metal shields between individual channels.
- Ground lead supplied for shields and pole pieces.
- Wide range temperature operation.
- Special design features may be supplied to meet your requirements.



COMPANY

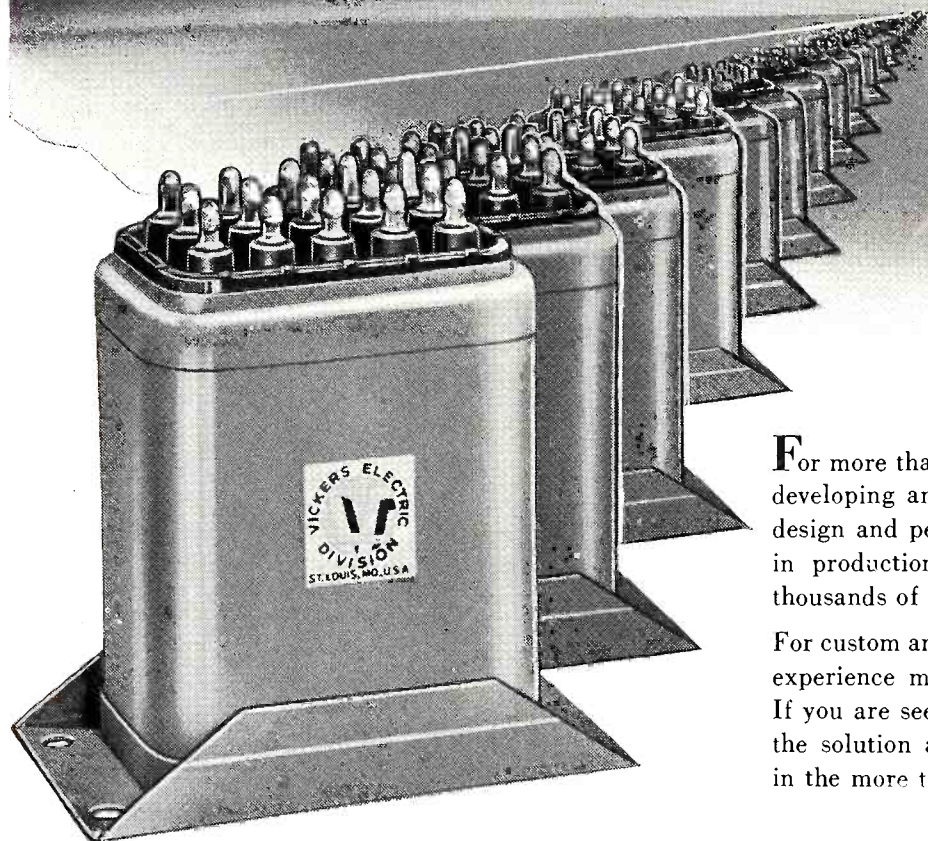
formerly
The Brush Development Co.
Brush Electronics Company
is an operating unit of
Clevite Corporation.

improve your controls...

specify

VICKERS

Magnetic Amplifiers



For more than 20 years, Vickers engineers have pioneered developing and producing magnetic amplifiers. The superior design and performance of Vickers amplifiers—manufactured in production volume for five years—are demonstrated thousands of functioning systems.

For custom amplifiers, Vickers engineering and manufacturing experience minimizes design and production time and cost. If you are seeking improved controls, you, too, may find that the solution already exists in Vickers design experience, in the more than 100 Vickers Standard Magnetic Amplifiers.

Standard amplifiers range from milliwatts to kilowatts in the following categories:

VICKERS HIGH PERFORMANCE SERIES STANDARD AMPLIFIERS, for applications demanding optimum performance, have the greatest power gain with shortest response time. High Performance Standard Amplifiers are available up to 108 watts for 60 cycle power—and up to 385 watts for 400 cycle power.

VICKERS HIGH GAIN STANDARD AMPLIFIERS serve intermediate power level applications with lower cost per watt output in the 1.5 to 1100 watt range. In this range, amplifiers are available for 60 cycle power, 120-

volt single phase, or 240-volt three phase.

VICKERS STANDARD HIGH POWER AMPLIFIERS, for high power applications, provide lowest cost-per-watt output. Amplifiers operating from 60 cycle power sources of 120, 240, or 440 volts, single phase, or 240 volts, three phase are available.

VICKERS LOW SIGNAL LEVEL STANDARD AMPLIFIERS operate with control power as low as 10^{-10} watts. They are suitable for low-level sources such as thermocouples and photocells. Gain and balance are adjustable.

Learn how Vickers Magnetic Amplifiers can solve your control problems. Detailed information specifications and engineering assistance will be promptly provided upon request.

Pioneers in Magnetic Amplifier Development

VICKERS ELECTRIC DIVISION

VICKERS Inc.

A UNIT OF THE SPERRY CORPORATION
1829 LOCUST STREET • SAINT LOUIS 3, MISSOURI

IDEAS

in the making

Araldite Bonding and Casting Resins developed by Ciba Research are simplifying manufacturing methods, improving product efficiency, and opening new fields of product development. You will want to know more about them.

ARALDITE® EPOXY RESINS

BONDING AND LAMINATING TYPES

ARALDITE TYPE NO.	PHYSICAL FORM	STORAGE LIFE	METHOD OF CURE	BOND STRENGTH* ALUMINUM TO ALUMINUM (psi)	REPRESENTATIVE APPLICATIONS
AN-100	Natural or amber colored powder	Almost unlimited at room temperature	Heat cure	4000-4500	Bonding of metals. Laminating.
AN-101	High viscosity liquid	1 year	Room temperature	2000-2500	Bonding and sealing of metal to glass. Bonding of porcelain, plastics to plastics, non-absorbent leathers.
AN-102	Low viscosity liquid containing solvents	1 year	Room temperature	1400-1600	Bonding of metal to metal and metal to wood.
AN-103	Non-flowing paste (tan color)		Heat cure	1200-1400	Bonding of loose-fitting joints.
AN-104	Non-flowing paste (tan color)	1 year	Room temperature	1000-1500	Bonding of loose-fitting joints. Bonding of rubber to metal.
AN-107	Heavy paste (tan color)	3 months	Heat cure	3000-3200	Laminating. Metal to metal bonding.
AN-111	Low viscosity liquid containing solvents	9 months	Heat cure	2000-2500	Bonding of metal to metal or other heat-resisting materials. Impregnating by vacuum method. Laminating.
AN-115	Medium viscosity liquid containing solvents	3 months	Heat cure	2500-3000	Impregnating, laminating and bonding.

A D1002-49T

CASTING AND IMPREGNATING RESINS

ARALDITE TYPE NO.	PHYSICAL FORM	STORAGE LIFE	METHOD OF CURE	POT LIFE	DIELECTRIC PROPERTIES	SHRINKAGE	REPRESENTATIVE APPLICATIONS
N-501	Amber solid	1 year	Heat cure	1-4 hrs.	Excellent	½-2%	Casting, potting, encapsulating. Impregnating glass cloth for dry lay-up.
N-502	Thin liquid	1 year	Heat cure Self cure	3-6 hrs. 1-4 hrs.	Good	½-2%	Casting, potting, encapsulating.
N-503	Liquid	1 year	Heat cure Self cure	3-6 hrs. 1-4 hrs.	Excellent	½-2%	Casting, impregnating glass cloth for wet lay-up.
N-504	Very thin liquid	1 year	Heat cure Self cure	7 days 1-4 hrs.	Good	< 2%	Impregnating, casting, potting, encapsulating.
N-505	Gray solid	1 year	Heat cure	1-2 hrs.	Excellent	< 1%	Potting and encapsulating high and low temperature service and thermal shock resistance.

SEND THIS COUPON . . . or write us on your company letterhead . . . for complete technical data on the physical properties and recommended procedures for the successful use of Araldite Resins for your own fabricating needs.

Ciba Plastics

BONDING ★ CASTING ★ COATING RESINS

CIBA COMPANY INC., PLASTICS DIVISION

627 Greenwich St., New York 14, N. Y.

(In Canada: Ciba Co. Ltd., Ciba Bldg., Montreal)

Please send me Ciba Plastics Technical Bulletins for

BONDING CASTING COATING

Name _____

Company _____ Title _____

Address _____

E. B. G.

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Eimac products have long been the criteria for good design in electronic equipment. Today Eimac tubes are the undisputed leaders of their field. Complete data on any of the Eimac products listed below are available by writing direct.



TETRODES

- | | |
|---------|----------|
| 4-65A | 4W20000A |
| 4-125A | 4X150A |
| 4-250A | 4X150D |
| 4-400A | 4X150G |
| 4-1000A | 4X500A |
| 4PR60A | 4X500F |



TRIODES

- | | |
|-----------|-------------|
| 2C39A | |
| 3W5000A3 | 100TL |
| 3W5000F3 | 152TH |
| 3W10000A3 | 152TL |
| 3X2500A3 | 250TH |
| 3X2500F3 | 250TL |
| 3X3000A1 | 304TH |
| 3X3000F1 | 304TL |
| 6C21 | 450TH |
| 25T | 450TL |
| 35T | 592/3-200A3 |
| 35TG | 750TL |
| 75TH | 1000T |
| 75TL | 1500T |
| 100TH | 2000T |

PENTODE

4E27A/5-125B



RECTIFIERS

- | | |
|---------|-------------|
| 2-01C | RX21A |
| 2-25A | 250R |
| 2-50A | 253 |
| 2-150D | 866A |
| 2-240A | 872A |
| 2-2000A | 8020 (100R) |
| KY21A | |



KLYSTRONS

- | |
|-------------|
| 3K20, 000LA |
| 3K20, 000LF |
| 3K20, 000LK |
| 3K50, 000LA |
| 3K50, 000LF |
| 3K50, 000LK |

TRANSMITTING TYPE TUBES

EIMAC TUBE TYPE	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS			
	Plate Dissipation Watts	Plate Voltage	Plate Current Milliamperes	Grid Dissipation Watts	Screen Voltage	Screen Dissipation Watts	Filament, Volts	Filament, Amperes	Amplification Factor	Transconductance
TETRODES										
1-65A	65	3000	150	5	400	10	6.0	3.5	5	4
4-125A	125	3000	225	5	400	20	5.0	6.5	5.9	2
4-250A	250	4000	350	10	600	35	5.0	14.5	5.1	4
4-400A	400	4000	350	10	600	35	5.0	14.5	5.1	4
4-1000A	1000	6000	700	25	1000	75	7.5	21	7.0	10
4PR60A	60	20,000	†	†	1500	8	26	2.25	†	5
4W20,000A*	20,000	8000	15,000	60	1500	200	10	30	5.5	75
4X150A*	150	1250	250	2	300	12	6.0	2.6	5	12
4X150D*	150	1250	250	2	300	12	26.5	.57	5	12
4X150G*	150	1250	250	2	300	15	2.5	6.25	5.0	12
4X500A*	500	4000	350	10	500	30	5.0	13.5	6.2	5
4X500F*	500	4000	350	10	500	30	5.0	13.5	6.2	5
TRIODES										
2C39A	100	1000	125†	2	...	...	6.3	1.0	100	22
3W5000A3	5000	6000	2500	150	...	...	7.5	51	20	20
3W5000F3	5000	6000	2500	150	...	...	7.5	51	20	20
3W10,000A3	10,000	5000	10,000	100	...	...	10	30	20	55
3X2500A3	2500	6000	2500	150	...	...	7.5	51	20	20
3X2500F3	2500	6000	2500	150	...	...	7.5	51	20	20
3X3000A1*	3000	6000	2500	50	...	...	7.5	51	5	11
25T	25	2000	75	7	...	...	6.3	3.0	24	2
35T	50	2000	150	15	...	...	5.0	4.0	39	2
35TG	50	2000	150	15	...	...	5.0	4.0	39	2
6C21	300	30,000	15	55	...	...	8.2	16.8	†	5
75TH	75	3000	225	16	...	...	5.0	6.25	20	4
75TL	75	3000	225	13	...	...	5.0	6.25	12	3
100TH	100	3000	225	20	...	...	5.0	6.3	38	4
100TL	100	3000	225	15	...	...	5.0	6.3	14	3
152TH	150	3000	450	30	...	...	5 or 10	12.5 or 6.25	20	8
152TL	150	3000	450	25	...	...	5 or 10	12.5 or 6.25	12	7
250TH	250	4000	350	40	...	...	5.0	10.5	37	5
250TL	250	4000	350	35	...	...	5.0	10.5	14	2
304TH	300	3000	900	60	...	...	5 or 10	25 or 12.5	20	16
304TL	300	3000	900	50	...	...	5 or 10	25 or 12.5	12	16
450TH	450	6000	600	80	...	...	7.5	12.0	38	6
450TL	450	6000	600	65	...	...	7.5	12.0	18	5
592/3-200A3	200	3500	250	25	...	...	10.0	5.0	25	3
750TL	750	10,000	1000	100	...	...	7.5	21.0	15	3
1000T	1000	7500	750	80	...	...	7.5	15.5	35	9
1500T	1500	8000	1250	125	...	...	7.5	24.0	24	10
2000T	2000	8000	1750	150	...	...	10.0	23.5	23	11
4E27A/5-125B	125	4000	200	5	750	20	5.0	7.5	5.0	2
PENTODE										
	Frequency Range Mc.	Collector Dissipation Watts	Beam Voltage	Beam Current Amperes	TV Peak Synchronizing Level	CW Power Amplification				
3K20,000LA	470-580	20,000	14,000	1.7	5500	3000				
3K20,000LF	580-720	20,000	14,000	1.7	5500	3000				
3K20,000LK	720-890	20,000	14,000	1.7	5500	3000				
3K50,000LA	470-580	50,000	19,000	2.6	12,000	7200				
3K50,000LF	580-720	50,000	19,000	2.6	12,000	7200				
3K50,000LK	720-890	50,000	19,000	2.6	12,000	7200				

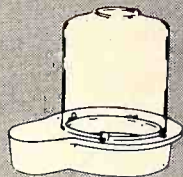
*External Anode requiring forced-air cooling
**Water-cooled

†Pulse Modulator
‡Cathode Current

EITEL-McCULLOUGH, INC
San Bruno, California

EIMAC TUBES!

Years of efficient, dependable performance have given Eimac tubes a product-reputation difficult to surpass. That is why the criteria of good design of any electronic equipment are products trademarked "Eimac."



AIR SYSTEM SOCKETS

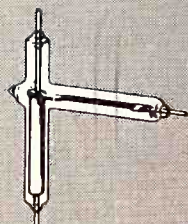
4-400A/4000 4-1000A/4006*
 4-400A/4006* 4X150A/4000
 4-1000A/4000 4X150A/4006*
 4X150A/4010

*Replacement Chimneys



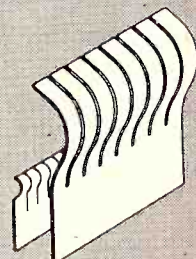
ACCESSORIES

HR Heat dissipating connectors
 Preformed Contact Finger Stock



VACUUM SWITCH

VS-2
 12V Coil
 24V Coil



CONTACT FINGER STOCK

17/32"
 31/32"
 1-7/16"

VARIABLE VACUUM CAPACITORS

VVC60-20
 VVC2-60-20
 VVC4-60-20

ION GAUGE

100 IG ion gauge

VACUUM CAPACITORS

VC6-20 VC25-20
 VC6-32 VC25-32
 VC12-20 VC50-20
 VC12-32 VC50-32

RECTIFIERS

TYPE	FILAMENT VOLTAGE	FILAMENT CURRENT AMPS.	HIGH VACUUM TYPES		
			PEAK INVERSE VOLTAGE	CURRENT AMPS. PEAK PLATE	AVERAGE PLATE CURRENT MA.
2-01C	6.3	0.4	1,000	0.010	
2-25A	6.3	3.0	25,000	1.0	50
2-50A	5.0	4.0	30,000	1.0	75
2-150D	5.0	13.0	30,000	3.0	250
2-240A	7.5	12.0	40,000	4.0	500
2-2000A	10.0	25.0	75,000	12.0	750
250 R	5.0	10.5	60,000	2.5	250
253	5.0	10.0	15,000	2.5	350
8020(100R)	5.0	6.5	40,000	1.5	100
MERCURY VAPOR TYPES					
*KY21A	2.5	10.0	11,000	3	750
RX21A	2.5	10.0	11,000	3	750
866A	2.5	5.0	10,000	1	250
872A	5.0	7.5	10,000	5	1250

*Grid Controlled

VACUUM CAPACITORS

TYPE	VARIABLE CAPACITY	RATING RF PEAK	TYPE	FIXED CAPACITY	RATING RF PEAK
VVC60-20	10-60 mmfd	20-KV	VC6-20	6 mmfd	20-KV
VVC2-60-20	Split Stator	40-KV	VC6-32	6 mmfd	32-KV
			VC12-20	12 mmfd	20-KV
	Parallel	20-KV	VC12-32	12 mmfd	32-KV
VVC4-60-20	Split Stator	40-KV	VC25-20	25 mmfd	20-KV
			VC25-32	25 mmfd	32-KV
	Parallel	20-KV	VC50-20	50 mmfd	20-KV
			VC50-32	50 mmfd	32-KV

AIR SYSTEM SOCKETS

TYPE	FOR USE WITH TUBE TYPE
4X150A/4000	4X150A or 4X150D
4X150A/4010 (Grounded Cathode Socket)	4X150A or 4X150D
4-400A/4000	4-400A
4-1000A/4000	4-1000A

PREFORMED CONTACT FINGER STOCK

WIDTH
 17/32"
 31/32"
 1-7/16"

A prepared strip of spring material slotted and formed into a series of fingers designed to make sliding contact.

HEAT DISSIPATING CONNECTORS

TYPE	HOLE DIA.
HR-1	.052
HR-2	.0625
HR-3	.070
HR-4	.1015
HR-5	.125
HR-6	.360
HR-7	.125
HR-8	.570
HR-9	.570
HR-10	.500

IONIZATION GAUGE

100 IG

An electronic vacuum pressure gauge. Filament voltage 3.5 to 7.5 volts.

VACUUM SWITCH

VS-2

Single pole double throw switch within a high vacuum adaptable for high voltage switching. Contact spacing .015". Switch will handle R-F potentials as high as 20 Kv. In DC switching will handle approximately 1.5 Amps. at 5 Kv.

Eimac
TUBES

COMPLETE DATA AVAILABLE
UPON REQUEST

EITEL-McCULLOUGH, INC.
San Bruno, California

DEPENDABLE ELECTRICAL INSULATION

BH TUBINGS AND SLEEVINGS

BH "1151" SILICONE RUBBER FIBERGLAS TUBING AND SLEEVING

A revolutionary Fiberglas Class H (inorganic) insulation for continuous operation through a temperature range of -90°F. to 400°F. No dielectric loss from handling, bending or operational stresses. Won't craze or crack when used to cover bent wire. No deterioration at high spot temperatures of 500°F. for 4 hours. Grades H-A-1 through H-C-2.

BH 649 FIBERGLAS TUBINGS AND SLEEVINGS

A superior insulation that keeps rated dielectric strength after rough handling and severe abrasion. Flexibility and other physical properties unaffected after 1500 hours at 105°C., as well as standard tests for NEMA Classes B-A-1, B-B-1 and B-C-1.

BH EXTRA FLEXIBLE FIBERGLAS SLEEVING

Comparable to single saturated (B-C-3) sleeveings but completely flexible, even after exposure to heat aging, since no hardening varnish is used. Non-fraying because of patented braid treatment.

BH SPECIAL TREATED FIBERGLAS SLEEVING

An unsaturated sleeveing for temperature applications up to 1200°F. Patented process retards raveling without the use of impregnants or binders.

BEN-HAR SPECIAL TREATED FIBERGLAS TUBING

Grades A-1 and B-1, meets normal operating and baking temperatures without stiffening or cracking. Will not fray or split in handling.

BH GRADE C-3 SILICONE FIBERGLAS SLEEVING

Non-raveling and non-combustible. Working temperatures range from 400°F. to -85°F. It is moisture-proof with high leakage resistance.

SATURATED FIBERGLAS SLEEVING

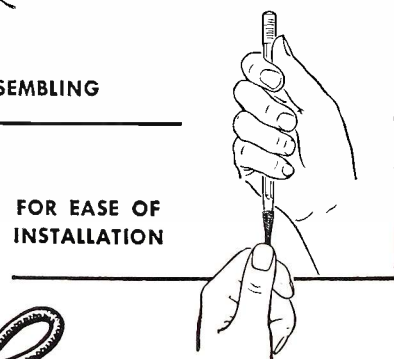
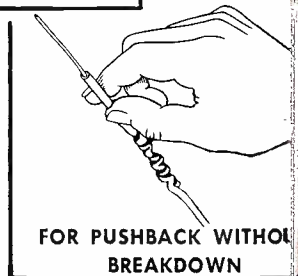
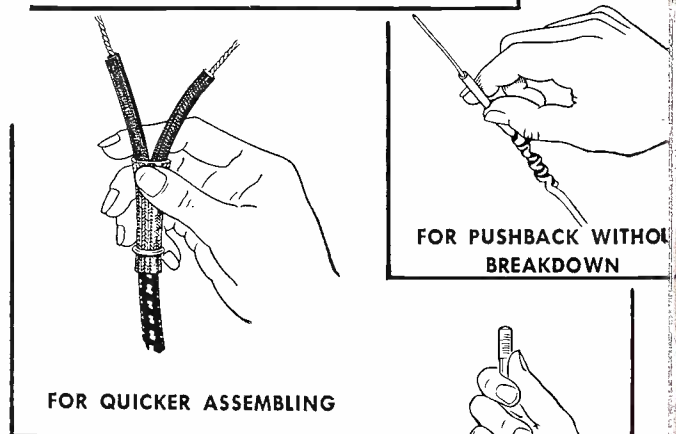
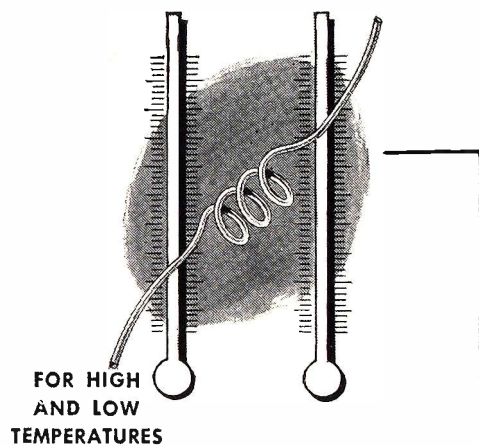
Available in Grades C-1, C-2 and C-3. Special treated to prevent fraying.

BH RAYON OR COTTON-BASE SLEEVING AND TUBING

Tubing: Magneto Varnished Tubing Grade A-2.
Flexible Varnished Tubing Grade B-2.
Sleeving: Saturated Sleeveing Grades C-1, C-2, C-3.

Here are the major Bentley, Harris products. Check them for the type of electrical insulation you need to protect your product. We invite you to send for samples to make your own tests. Feel free to call on the BH Laboratories for help in specific insulation problems — we welcome tough assignments. Write for complete BH Insulation details, or additional catalog information.

Address Dept.-E-13
Bentley, Harris Manufacturing Co., Conshohocken, Pa.



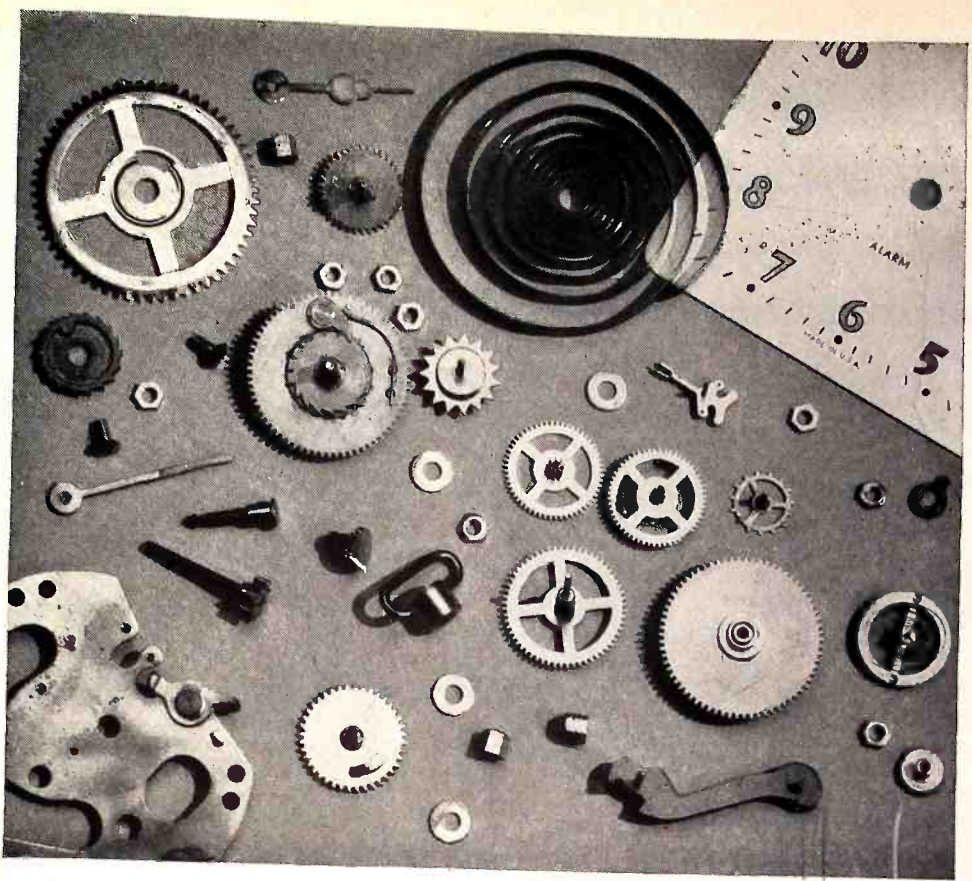
BH Fiberglas SLEEVINGS

BENTLEY, HARRIS MANUFACTURING COMPANY, CONSHOCKEN, PENNA., U.S.A.

Ready reference throughout the year... this Mid-June issue of electronics serves the industry in the exacting manner that it requires.

The electronics BUYERS' GUIDE

provides users with the only accurate and reliable product source available in the electronic industry... they refer FIRST to the GUIDE."



You'd never buy a clock this way

You don't ask to see the pieces of a clock. You *expect* it to perform as its makers say it will. You listen, you look, you buy. In short, confidence sells more clocks, automobiles, and *instruments* than investigation and analysis combined.

Do your instruments inspire this instant confidence? Do they *look* scientific, precise, accurate? Or do they have dials that are cluttered, hard-to-read, old-fashioned? . . . a sure sign that their operation is also cluttered and old-fashioned.

Don't underestimate this point. Having made millions of dials and nameplates for all kinds of instruments and timepieces, we know how dial design can effect saleability. So, take a hard look at your product line, and see if there's room for our experience.

We make self-luminous, fluorescent, phosphorescent, or *nonluminescent* dials — etched, lithographed, engraved, photographically reproduced, or screened — also edge-lighted panels — in other words *whatever* type you need . . . made with emphasis on accuracy and appearance. We also make special, high-accuracy scientific dials, in as small quantities as required. Literature on request. Simply address Dept. E-6, U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.



MAKERS OF: Luminescent Materials: Radioactive, fluorescent, phosphorescent • Powders: Cathode-ray tube, television tube • Radium Locators: Pendants, lenses, buttons, screws, markers • Static Eliminators • Radioactive Foils — Alpha-Ray Ionization Sources • X-Ray Screens • Processed Isotopes • Neutron Sources • Radiation Sources and Standards.



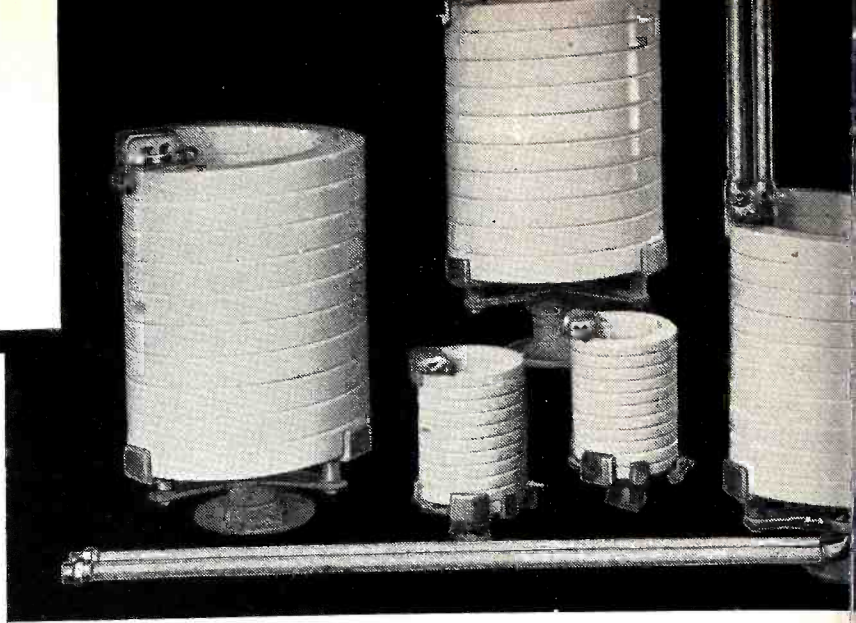
DIALS • NAMEPLATES • EDGE-LIGHTED PANELS

Lapp



TUBE SUPPORTS for air-cooled tubes

No longer is it necessary for equipment manufacturers to design supports for forced-air-cooled tubes. After producing many such special designs, Lapp has engineered and built a complete series of insulating supports for air-cooled tubes. Use of these supports facilitates design of transmitter and other high-power circuits. Simple, compact, efficient and attractive in appearance, in porcelain or steatite, they make for economical production, easy interchangeability, and availability of replacement units. Write for Bulletin 301, with complete description and specification data.



INSULATION FOR WATER-COOLED SYSTEMS

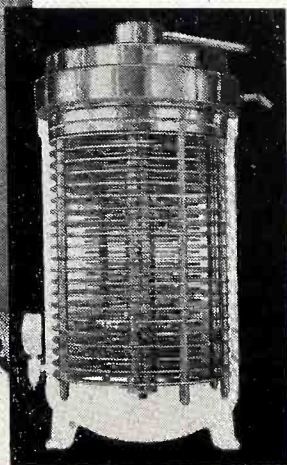
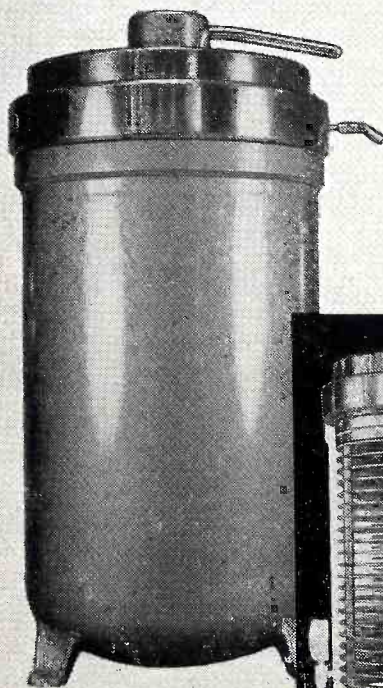
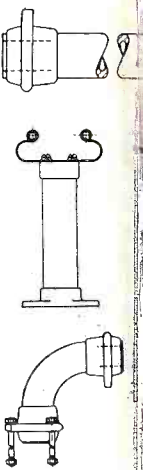
For carrying cooling water which must undergo a change in position of Lapp porcelain eliminates troubles arising from water contact and conductivity, sludging and electrolytic attack of fittings. The cleanliness and high resistance of cooling water is assured—for positive cooling and long tube life.

LAPP PORCELAIN WATER COILS

Twin-hole and single-hole models in sizes to provide flow of cooling water from 2 to 90 gallons per minute. Cast aluminum mounting bases, lead pipe or flexible metal hose for attachment.

LAPP PORCELAIN PIPE

Inside diameters $\frac{3}{4}$ " to 3", in straight, 90° and 180° elbows, fittings. Swivel-type connections. Standoff insulators attach directly to fitting bolts. Write for Bulletin 301 with specifications for Lapp Porcelain Water Coils and Porcelain Pipe.



LAPP GAS-FILLED CONDENSER Capacitance for high-voltage, high-current

The record of more than 15 years' service, in thousands of installations, proves the reliability of the Lapp Gas-Filled Condenser. For duty at high voltages and high currents, this unit offers advantages of extreme compactness . . . low loss . . . high efficiency factor . . . constant capacitance under temperature variations . . . grounded tuning shaft . . . and rugged sturdiness. Units available in five tank diameters, 7" to 24" . . . in fixed or variable capacitance . . . capacitances to 60,000 mmf; current ratings to 100 amperes at 1 mc; voltages to 100 Kv peak. Write for Bulletin 301.

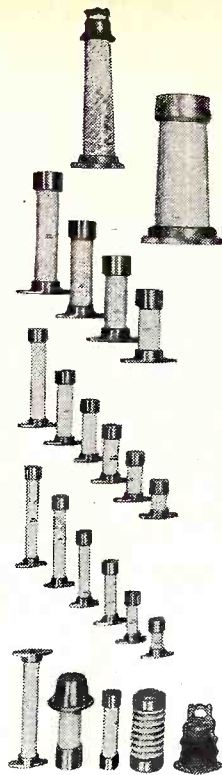
ENTRANCE INSULATORS

To eliminate losses which occur in ordinary types of bushings at radio frequency, Lapp units use air as major insulation, porcelain path being lengthened by its "bowl" shape. In wide variety of types for most electrical and mechanical requirements.

STAND-OFF INSULATORS

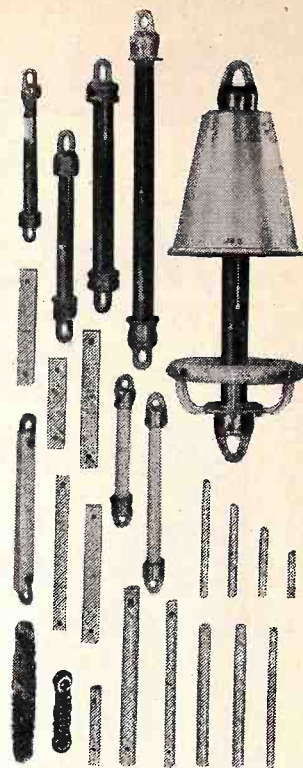
Dependable mechanical and electrical performance—and trim good looks. Hundreds of standard and special types available.

Write for Bulletin 301, listing entrance and stand-off insulators.



ANTENNA STRAIN INSULATORS

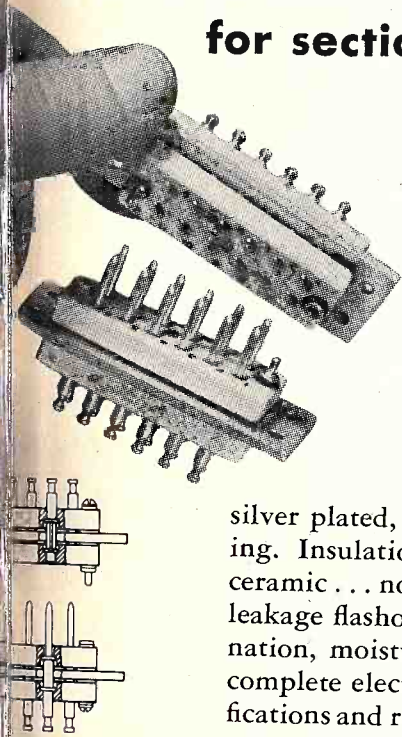
The largest of the porcelain rod insulators shown develops 12,000 lb. strength. Available, as specified, with rain shield and/or corona rings. Smaller units, in porcelain or steatite, for all strain or spreader use. Engineering and production facilities also available for special performance units. See catalog 301.



PLUG-AND-RECEPTACLE UNITS for sectionalizing circuits

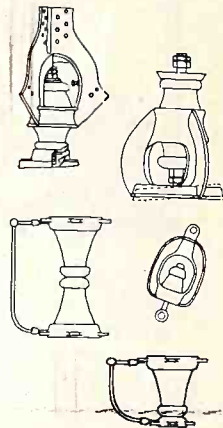
For panel-rack or other sectionalized circuits, Lapp offers a variety of plug-and-receptacle units. Any number of contacts can be provided (in multiples of twelve). Male and female contacts are full floating, for easy alignment and positive contact. Contacts

silver plated, terminals tinned for soldering. Insulation is steatite, the low-loss ceramic... non-carbonizing even under leakage flashover resulting from contamination, moisture or humidity. Write for complete electrical and mechanical specifications and recommendations.



ANTENNA TOWER INSULATORS

Most of the world's radio towers are supported by Lapp insulators, including the tallest guyed mast ever built. Through the Lapp "compression cone," immense loads can be carried by electrical porcelain. Write for data on Lapp footing insulators for self-supporting radiators, mast-base insulators, or guy insulators.



SPECIAL ASSEMBLIES

Business is electrical porcelain, its application, manufacture, and assembly. Our skill is in our knowledge of the capabilities, and limitations, of insulation... in engineering ingenuity to meet requirements... and in efficient production. We have need for insulating parts and associated sub-assemblies, we may be able to show you how they can be made most economically, to perform most efficiently.

Lapp

LAPP INSULATOR CO., INC.
RADIO SPECIALTIES DIVISION
100 SUMNER ST., LEROY, N.Y.

THE
**Number One
Name**

In Socket Screws & Keys

ALLEN



Don't take it for granted that any hex socket screw is an Allen. There's only one way to take advantage of world famous Allen standards of precision fit and the strength and temper of special purpose Allenoy steel, in precision socket screws and keys: Specify genuine Allens, and be sure they come in the black and silver striped Allen package. Sold everywhere through leading Industrial Distributors exclusively. We will gladly give you the names of those in your locality and answer technical questions direct from factory Engineering Headquarters.

ALLEN O HEAD SET SCREWS: Achieve maximum *holding* power at the point by securing their *locking* action through uniform accuracy of fit, pitch diameter and perfect thread lead.

ALLEN O HEAD CAP SCREWS: Permit more compact design. Clean "pressur-formd" sockets and burr-free threads speed assembly work.

ALLEN O HEX KEYS: Size marked and made from special Allenoy steel for greater strength. Chamfered ends for quicker, easier insertion.



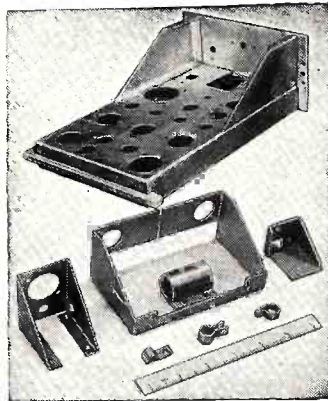
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To Your Specifications

Abalon's excellent engineering facilities and expert production supervision are at your service.

We have a large stock of dies on hand and complete up-to-date facilities for metal fabrication from any type metal with any type finish.

Estimates per your blueprints cheerfully given.



- **PANELS**
- **CHASSIS**
- **ENCLOSURES**
- INSTRUMENT PANELS
- HIGH VOLTAGE CAGES
- SPARE PARTS BOXES
- MULTI-RACK CABINETS
- RECEIVER and TRANSMITTER HOUSING
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- CHASSIS of ALL TYPES
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Years of experience in metal fabrication



Abalon PRECISION MFG. CORP.

540 CASANOVA STREET NEW YORK 59, N.
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QUALITY TERMINAL BOARDS

STANDARD & CUSTOM BUILT, COMPLETE TO CUSTOMERS PRINT SPECIFICATIONS

TERMINAL LUGS

STANDARD & MINIATURE. INSULATED STANDOFFS

ELECTRONIC HARDWARE

CONNECTORS, SPRING TYPE PLUG ASSEMBLIES

LYNN ELECTRONIC RESEARCH CO.

9 West Magnolia Blvd.

Burbank, CA

TOP HAT FOR PLUG-IN UNITS

A widely used, dependable, improved clamp for electron tubes, relays and capacitors.



WRITE FOR 1953 CATALOG

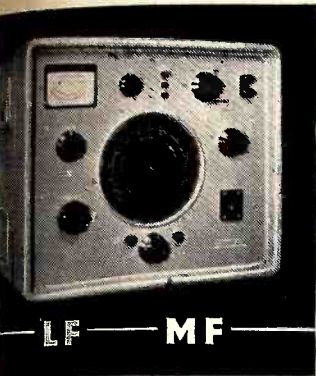
EASY TO APPLY

INSTANTLY RELEASED

POSITIVE LOCKING ACTION



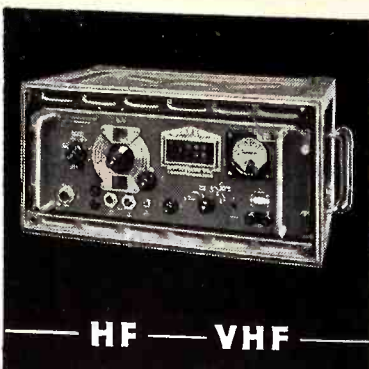
TIMES FACSIMILE CORPORATION
540 West 58 St., New York
1523 L St., N. W. Washington



25 cycles to
5 megacycles.

VIDEO OSCILLATOR
Type TF 885A

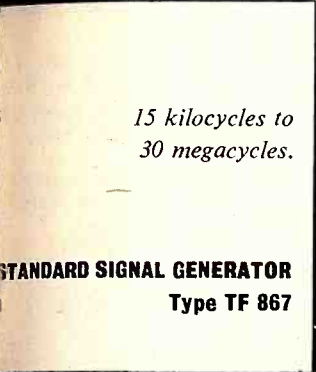
LF — MF



2.5 to 10 megacycles
and 20 to 100 megacycles.

CARRIER DEVIATION METER
Type TF 934

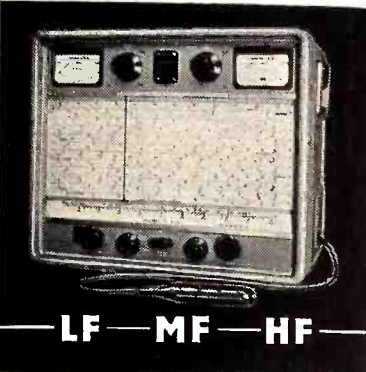
HF — VHF



15 kilocycles to
30 megacycles.

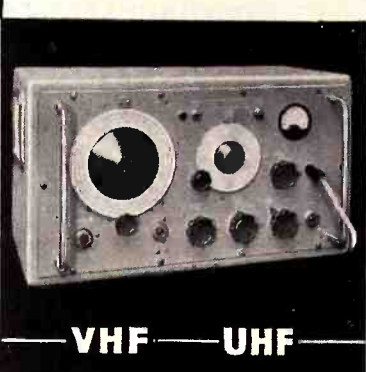
STANDARD SIGNAL GENERATOR
Type TF 867

LF — MF — HF

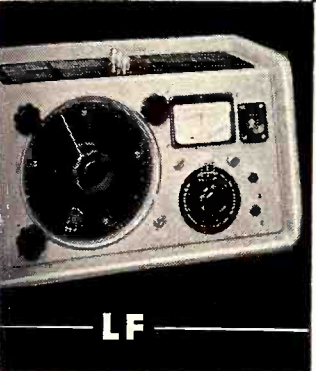


300 to 600 megacycles
or 200 to 400 megacycles
or 450 to 900 megacycles.

SIGNAL GENERATOR
Type TF 762C (series)



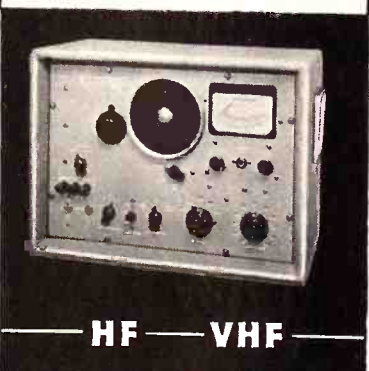
VHF — UHF



1,000 cycles, Inductance
and Capacitance;
Resistance at D.C.

UNIVERSAL BRIDGE
Type TF 868

LF



13.5 to
216 megacycles.

FM/AM SIGNAL GENERATOR
Type TF 995

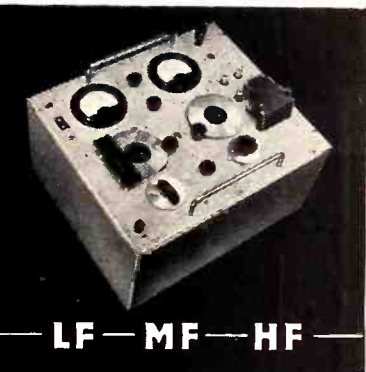
HF — VHF



50 kilocycles to
50 megacycles.

CIRCUIT MAGNIFICATION METER
Type TF 329G

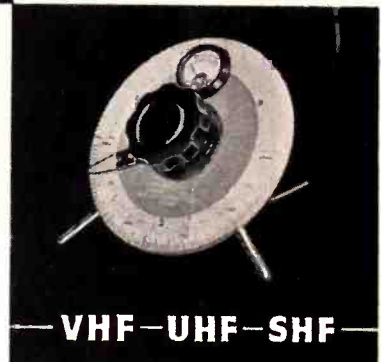
LF — MF — HF



250 to
4,000 megacycles.

PORTABLE FREQUENCY METERS
Type TF 1026 (series)

VHF — UHF — SHF



■ Covering the whole radio spectrum →

A few examples of telecommunications test equipment, representative of the quality, reliability and precision workmanship of the wide range manufactured by

MARCONI INSTRUMENTS

VACUUM TUBE VOLTMETERS · FREQUENCY STANDARDS · OUTPUT METERS
WAVE METERS · WAVE ANALYSERS · Q METERS · BEAT FREQUENCY OSCILLATORS

23-25 BEAVER STREET · NEW YORK 4

CANADA: CANADIAN MARCONI CO., MARCONI BUILDING, 2442 TRENTON AVENUE, MONTREAL

ENGLAND: Head Office: MARCONI INSTRUMENTS LIMITED, ST. ALBANS, HERTFORDSHIRE

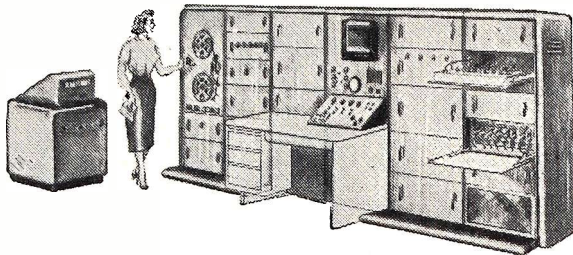
Selling Agents in Export: MARCONI'S WIRELESS TELEGRAPH COMPANY LIMITED, MARCONI HOUSE, STRAND, LONDON, W.C.2

ASCOP

PRECISION ENGINEERING IN ELECTRONICS

Telemetry and Data Handling Equipment
Special Components

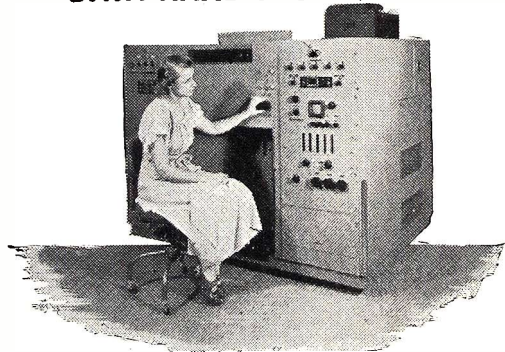
GROUND STATION EQUIPMENT



Installations for reception and all forms of handling and reduction of data from pulse width and FM/FM radio telemetry systems • Custom-engineered and custom-built to hold equipment to a minimum consistent with accuracy, operation ease, reliability • Functional mounting of components assures servicing ease — and flexibility for ready unit expansion with any of the following:

- Specialized receiving equipment
- Magnetic tape field storage and playback
- Regenerative integrator for PM signals
- Channel selector for PW systems with automatic zero and channel sensitivity adjustments, and
- automatic missing pulse insertion.
- Oscillographic film reader, with line center finder
- Tabulated numerical output
- Punched card output
- Graphical output

DATA HANDLING EQUIPMENT



Automatic or semi-automatic devices for marked reduction of time, expense, man-power usually required to place volumes of recorded data in final usable form • Input data — film records, varying DC voltages, magnetic tape recordings, etc.— processed point by point, at high rates, with automatic correction for zero drift, scale factor, and measuring system non-linearities • Outputs available as continuous plots on film or paper, with scale and time coordinates, as DC voltages, as pulse coded signals for remote transmission, or as electrical indications for existing tabulating and card punching devices • All systems custom-designed for accuracy and economy; custom-assembled from special purpose components devised in continuous engineering of data handling systems.

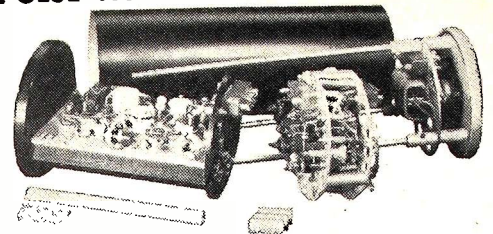


Your Inquiries Are Invited • Write or Telephone

Applied Science Corp. of Princeton

P. O. Box 44, Princeton, N. J. Plainsboro 3-4141

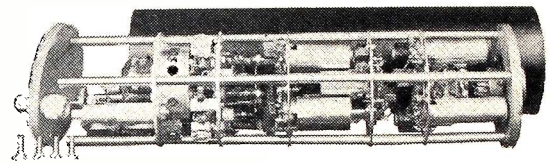
PULSE WIDTH RADIO TELEMETERING



PW/PM Small, rugged units particularly suited to vehicular use where many different variables must be continuously transmitted

- 30 data channels
- 215-235 mc Carrier-crystal controlled
- Based on RDB telemetry standards
- 4 watt RF power output
- 30 cps sampling rate
- 1% system accuracy
- 1/2% linearity
- 0.5 volt DC inputs
- 60 g sustained acceleration
- -40° to +60°C
- Vibration — 1/8 in. at 60 cps
- Single or two pole form
- 3 1/4 in. diam.; 7 in. length; 7 lbs. weight
- Primary power 30 volts, 3.5 amps

Note: Also available without dynamotor. Transmitters available separately. Integral subcommutator if more channels are desired.



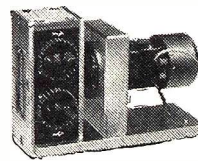
PW/FM For higher power output, with space no factor. Still highly reliable over long distances. Components readily accessible for replacement to extend unit life.

- Based on RDB telemetry standards
- 215-235 mc Carrier
- Max. drift — .04%
- 10 watt RF power output
- 30 data channels
- 30 cps sampling rate
- 1% system accuracy
- 1/2% linearity
- 0.5 volt DC inputs
- 60 g sustained acceleration
- Vibration: 1/8 in. at 60 cps
- 10 kc oscillator supply for AC pickup included
- 4 1/4 in. diam.; combined length 10 lbs. combined weight
- Primary power 30 volts at 5.7 amps

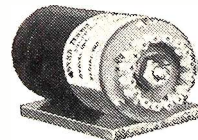
Note: Model PAD-1 Power Amplifier-Dynamotor unit may be added to increase transmitter power to 40-50 watts. Transmitter of Transmitter-Dynamotor packages available separately.

HIGH-SPEED ROTARY SAMPLING SWITCHES

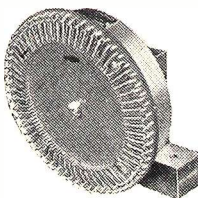
ASCOP designs and manufactures switches to your most difficult and exacting requirements. Here are a few typical examples:



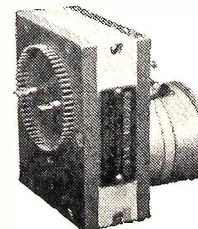
TYPE F Built to withstand vibration, shock, temperature and altitude extremes. Switching designed for airborne radio telemetry systems. Motors for 27, 12, and 6 volts. Up to 30 poles, each with 30 contacts. Sampling speeds from 0.1 to 20 rps.



TYPE U Custom-designed for limited space applications. Complete with drive motor, yet only 1 in. in diameter. A single pole samples 32 fixed contacts at the rate of 100 rps.

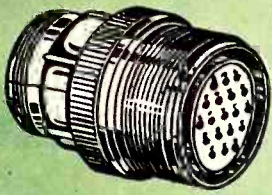


TYPE L For high performance with space secondary. Single pole samples 120 fixed contacts at rates up to 500 rps. Connection to external drive through 1/4 in. steel shaft running in sealed bearings. Special contact material for long service-free life.



TYPE V For precision in sampling plus long life. Synchronous drive permits selection of single pole sampling of 60 fixed contacts at many rates from 1 rps. to 1 rev. per day. Adaptable, through variety of mounting terminals, for use as a component in industrial instrumentation systems.

AN-3101 A/B



NOW...

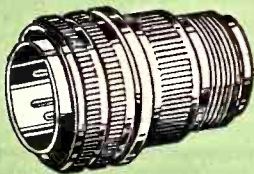
DEADLINE PROBLEMS ELIMINATED

by Wilgreen Industries connector specialists. AN and UG connector delivery in 24 to 48 hours will solve your deadline problems.

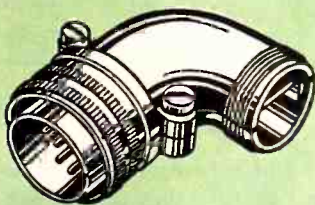
Wilgreen Industries

99 MURRAY STREET, NEW YORK 7, N. Y. • WOrth 4-2490-1-2

AN-3106 A/B



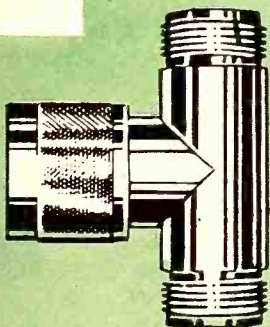
AN-3108 A/B



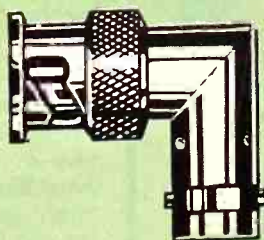
Many manufacturers have come to depend upon our prompt deliveries, from stock, instead of the promised four to sixteen weeks deliveries from the factory.

We carry a complete and diversified stock of AN and UG connectors at all times and are in a position to make deliveries within 24 to 48 hours, thereby eliminating all unnecessary deadline problems due to the lack of AN and UG connectors. A large portion of our inventory meets with current Army-Navy specifications. Send for our listings of AN and UG connectors. Quotations will be gladly submitted on request.

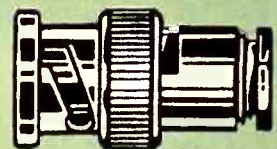
Yours for prompt service.



UG-107 B/U



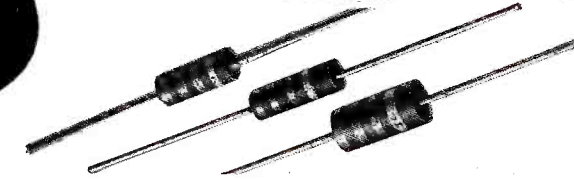
UG-306/U



UG-88/U

PROMPT ATTENTION TO "D.O." ORDERS

STACK



FIXED RESISTORS

JAN-R-11 TYPES

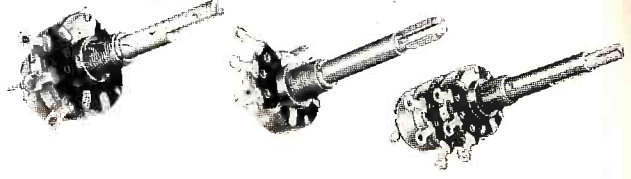
Styles
RC10, RC20,
RC21, RC30,
RC31, RC41,
and RC42.

Write for
Stackpole
Bulletin J-2.

$\frac{1}{2}$ -, 1-, and 2-Watt Sizes in
all RTMA Preferred Values

Fully insulated and moisture-protected by phenolic sleeves, Stackpole resistors are available in all standard and many special values for radio, television, military and commercial uses. In addition, Stackpole offers special resistors for automotive, lightning arrestor, capacitor discharge, surge and other uses.

Write for Stackpole Catalog
RC-9.

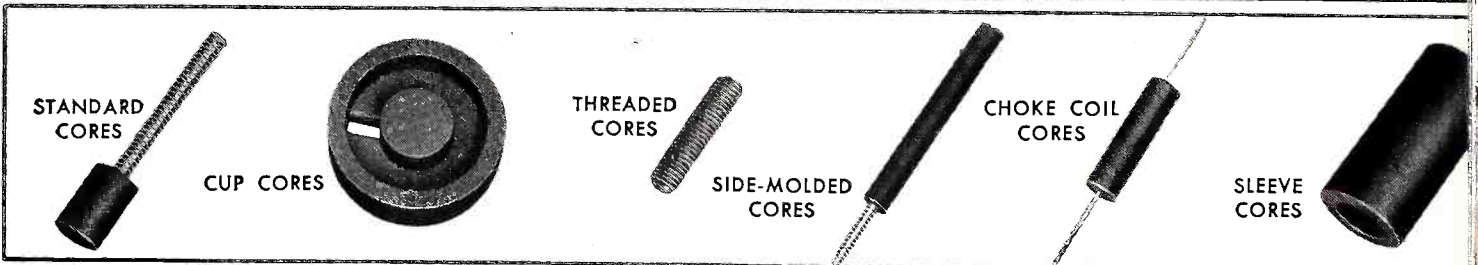


VARIABLE RESISTORS

VERSATILE SWITCHES

Small, reliable
line switches are
made in ratings
and circuitry for
every need in-
cluding portable
and auto radios.

Stackpole offers a dependable selection of volume and tone control potentiometers, etc. for radio, instruments, and other equipment. Single, ganged, and concentric switch designs are available in values from 500 ohms to 5 megohms and in ratings from .5 watt. Types range from the midget LR control for TV to the conservatively rated .6 watt Type LP for heavier duty wear. Special taps, extended bushings or other features can be supplied. Write for Catalog RC-9.



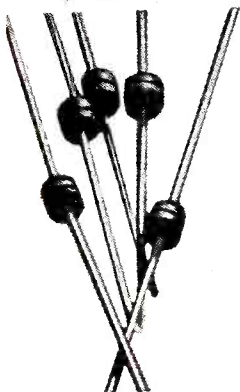
IRON CORE HEADQUARTERS

The widespread use of high Q coils with a consequent reduction in complicated circuitry has resulted in no small part from Stackpole engineering that has made new and better iron cores available at attractive prices. Stackpole production includes practically all types in common use — including cores for high- and low-frequency

coils and transformers, chokes, and side-molded types for permeability tuning — as well as numerous special types.

For all styles — standard or special — Stackpole manufacturing techniques assure iron cores of outstanding dependability and uniformity. Write for Catalog RC-9.

Fixed Composition CAPACITORS



47 TYPES

0.1 to 10.0
mmf. RTMA
5%, 10%,
and 20%
tolerances.

Type GA

Unmatched for low cost, high stability, and scarcely larger than $\frac{1}{2}$ -watt resistors, Stackpole "GA" capacitors are the most efficient way to couple or by-pass R-F circuits. Sturdily molded of high-dielectric constant material, these low-value capacitors have physical and electrical advantages that save assembly and testing time in virtually every R-F circuit. Write for Stackpole Catalog RC-9.

MOLDED COIL FORMS

for fast, low cost assembly

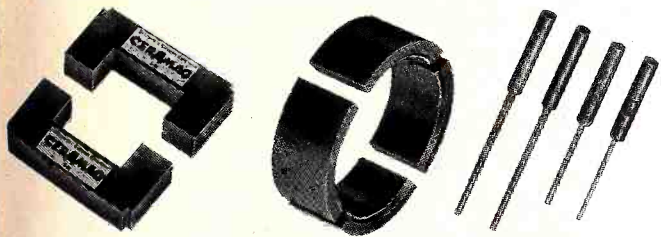
Inexpensive Stackpole molded coil forms permit smaller coils and pave the way for simplified point-to-point wiring with a minimum of soldered connections. Either axial or hairpin leads, securely anchored, are available. Types can also be supplied with iron core sections, thereby increasing Q materially, decreasing the amount of wire for a given inductance, and reducing stray magnetic fields. Write for details and samples to specifications.



STACKPOLE

Ceramag[®]

THE REALLY UNIFORM FERROMAGNETIC CORES



**Lower Losses with Higher Efficiency . . .
Lighter Weight — Smaller Sizes
Much Higher Permeability**

Standard Stackpole Ceramag Cores provide permeabilities in the order of 10 to 1 or higher by comparison with conventional iron cores. In addition, they have less corona effect and operate much cooler due to eddy current losses resulting from their high resistivity.

The remarkable uniformity of Ceramag Cores has long made them first choice of leading television producers. Typical applications include use as cores for flyback transformers, cathode ray tube deflection yokes, width control; low-loss inductors; I-F pulse and coupling transformers; and various others where Ceramag offers distinct advantages. Details on standard and special Ceramag grades are covered in *Bulletin RC-9A*.



LOW COST SWITCHES

**for instruments, radios, appliances,
toys, small motors and similar uses**

Press up your product—add to its convenience and "saleability" with these sturdy, low-cost slide switches! Over 20 fractional amperage and new 3 amp. types for fractional HP motors are available. Most types can be supplied with or without detent, spring-return, or other features to match your specifications exactly. Modifications, including adaptations for rotary or plunger action, can be produced economically. Write for new *Stackpole Switch Bulletin RC-9B*.

CARBON & GRAPHITE SPECIALTIES

Solve Friction, Temperature, Corrosion, Shaft Sealing, Arcing, and many other problems



- Anodes • Battery Carbons • Bearing Materials • Brazing Furnace Boats • Brushes of all types for rotating electrical equipment • Carbon and Graphite and Molded Metal Contacts • Chemical Carbons • Clutch rings • Dash Pot Plungers • Electric Furnace Heating Elements • Electrolytic Anodes • Friction Segments • Glass Molds • Carbon Ground Rods • Mercury Arc Rectifier Anodes • Metal-Graphite Contacts • Power Tube Anodes • Rail Bonding Molds • Rare Metal Contacts • Resistance Welding and Brazing Tips • Seal Rings (for gas or liquid) • Special Molds and Dies • Salt Bath Rectification Rods • Spectrographite • Trolley and Pantograph Shoes • Voltage Regulator Discs • Water Heater and Pasteurization Electrodes • Welding Carbons • Welding Plates and Paste

CARBON-GRAPHITE DATA BOOK

Newly revised and enlarged, *Stackpole Catalog 40A* contains helpful data on carbon, graphite, and carbon-graphite properties and their engineering uses.

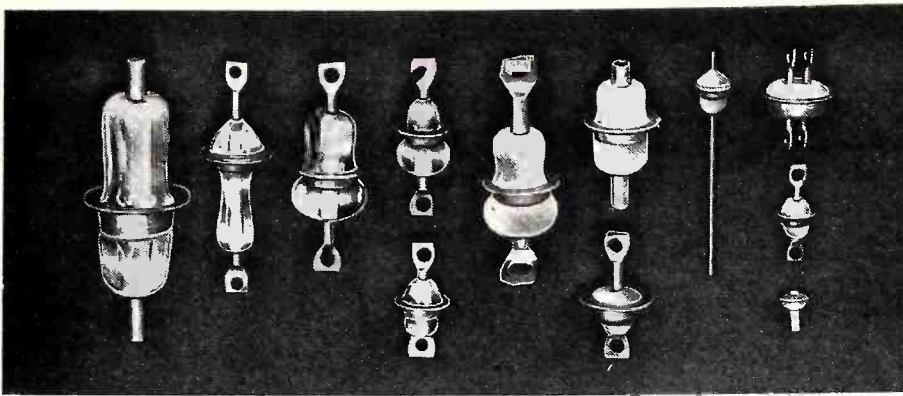


GET THIS ^{BIG} 48 Page CATALOG

Just out, the new *Catalog RC-9* gives detailed specifications on the latest Stackpole Electronic Components described on these pages. Write on your business letterhead for your copy.

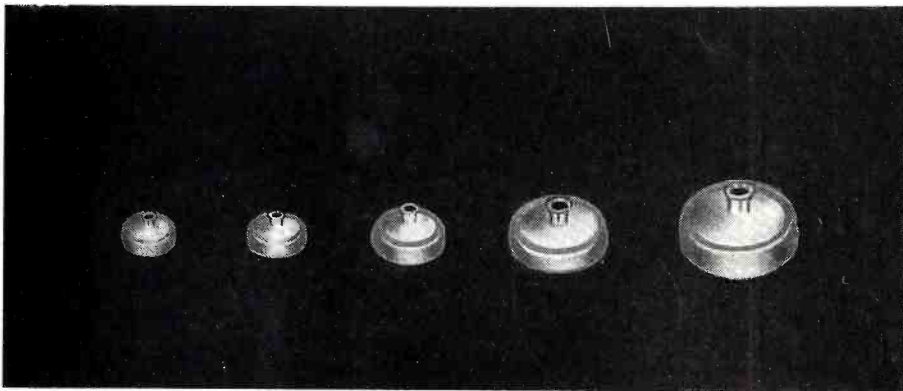
Electronic Components Division

STACKPOLE CARBON COMPANY, ST. MARYS, PENNSYLVANIA



**NEED A GOOD SOURCE
FOR TERMINALS?
HERMASEAL MAKES ALL
KINDS, ALL SIZES!**

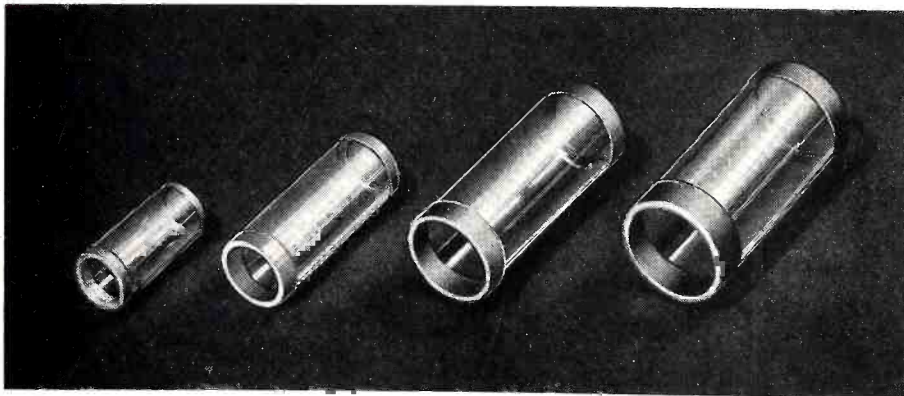
SMALLEST TO LARGEST—Hermaseal manufacturers Sealed Terminals in an extremely wide range of sizes. Terminals for very low to very high voltage, with tubular electrodes for high current-carrying capacity and with solid electrodes for moderate current requirements. Need Complete Assemblies? We have facilities for soldering terminals to your transformer covers . . . evacuating and pressure filling enclosures.



**END CAPS FOR
CONDENSERS.
FIVE STANDARD SIZES
TO FIT MOST NEEDS!**

When you need Tubular Button End Caps for condensers . . . end caps that must meet *high quality* standards . . . yet cost is a factor . . . and you need them in a *hurry* . . . call on Hermaseal!

Hermaseal is a top specialist, a pioneer in hermetically sealed terminals, sealed headers and allied parts for the radio-electronics industry.



**HERMASEAL GLASS
SEAL TUBES HELP
SPEED-UP ASSEMBLY!**

You can save time, cut down on rejects because Hermaseal Seal Tubes have metalized ends for easy soldering to end caps. Hermaseal Seal tubes are available in a wide range of stock and special styles and sizes.



THE HERMASEAL COMPANY, INC.
1101 LAFAYETTE ST., ELKHART 50, INDIANA

Let Hermaseal Help You with Header and Sealed Relay Assembly Problems!

Simple or complex, standard or special, Hermaseal makes them all, 2-electrode crystal holder bases, standard octal headers up to 18-terminal headers available in complete range of sizes, styles and patterns. Hermaseal can do the wiring and supply enclosures, with either dry air fill or vacuum-pumped and pressure-filled with dry nitrogen, for relays, transformers, choke coils, etc. Hermaseal hermetically sealed assemblies meet all specifications, are available in wide range of sizes and adaptations to meet specific requirements.

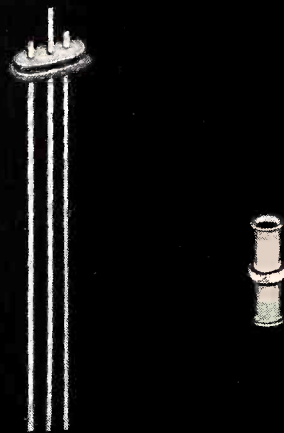
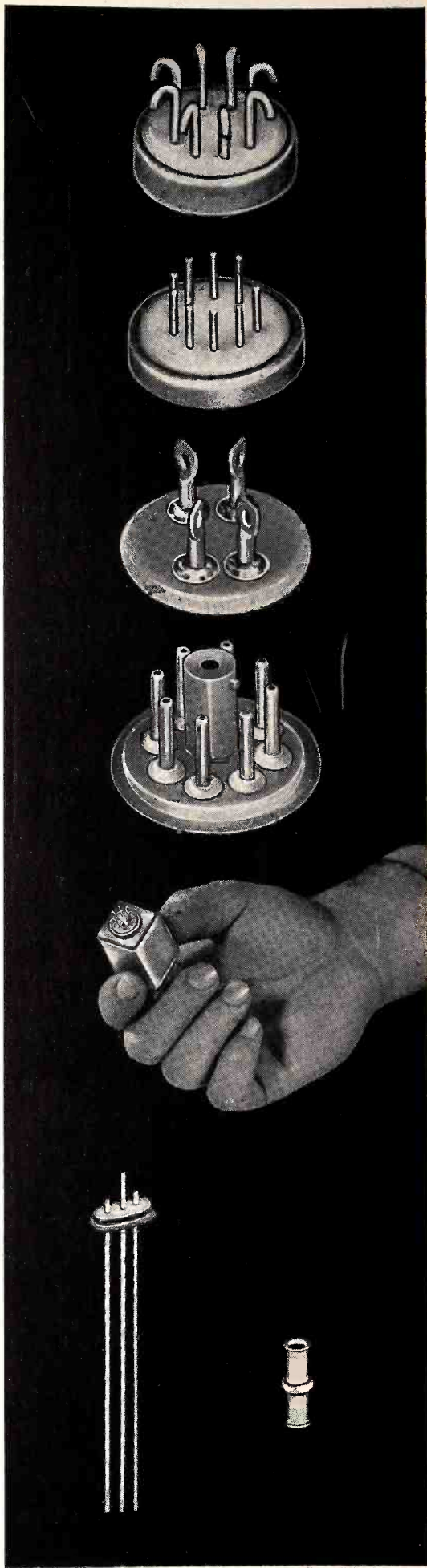


Transistor Bases and Hermetically Sealed Enclosures! Pioneered and In Production at Hermaseal!

Ask for Hermaseal Help with your transistor application problems. We have solved many of the difficulties of heat and humidity protection and mounting germanium diodes, point-contact transistors and junction transistors for a wide variety of applications. Hermaseal's experience with new glasses, metal alloys, and smaller, close-tolerance seals, is at your service.



THE HERMASEAL COMPANY, INC.
1101 LAFAYETTE ST., ELKHART 50, INDIANA





TUNABLE REFLEX TYPES FOR X-BAND RADARS AND BEACONS

Rugged construction for high-shock applications; integral leads for high-altitude unpressurized operation; low-voltage low-noise operation with rapid warmup—on frequency in 30 seconds—production lots, quantity prices.

Type	Frequency, kmc	Local Oscillator		High Power		Terminations	Tuner
		Resonator Voltage, v	Power Output, mw	Resonator Voltage, v	Power Output, mw		
V-260	8.5-10.0	200	15	350	125	3-pin base	slotted shaft
V-270	8.5-10.0	200	15	350	125	integral leads	slotted shaft
V-280	8.5-10.0	150	12	350	140	3-pin base	lock nut
V-290	8.5-10.5	150	12	350	140	integral leads	lock nut

FOR MICROWAVE RELAY SYSTEMS

Long life; low distortion; low long-time drift in tubes for transmitter and local-oscillator microwave-relay service in the frequency bands tabulated.

Type	Frequency kmc	Power Output, mw	Resonator Voltage, v	Tuner
X-26 (A to F)	5.925-7.725	1000 25	750 300	slotted shaft
V-53	10.7-11.7	50	300	slotted shaft
V-54	10.5-12.2	100	350	lock nut

FOR LABORATORY MEASUREMENTS, SPECIAL USES

Excellent microphonic characteristics; smooth-operating shaft tuners have minimum chatter and backlash; X-13 in production lots, quantity prices.

Type	Frequency kmc	Power Output, mw	Resonator Voltage, v	Tuner
X-12	12.4-17.5	30	600	micrometer
X-13	8.2-12.4	250	500	micrometer
V-55	8.2-11.5	600	500	lock nut
V-58	8.5-10.0	620	500	slotted shaft

TWO-RESONATOR OSCILLATOR AND AMPLIFIER TYPES

Fixed-frequency x-band radar and beacon tubes for severe service. Non-microphonic characteristics; molded silicone-rubber connections and integral leads for high-altitude unpressurized operation (except X-21); power outputs as high as 8 watts c-w, 500 watts pulsed.

Type	Frequency kmc	Power Output, w	Resonator Voltage, v	Gain db
X-21 (oscillator)	9.1-11.0	5	1300	...
V-23 (oscillator)	9.1-11.0	5	1300	...
V-27 (amplifier)	9.1-11.0	8	1300	10
V-62 (amplifier)*	9.1-11.0	8	1300	10
V-63 (oscillator)	8.5-9.4	5	1300	...

*V-62 has control grid for amplitude modulation

MULTIPLIER AND MULTI-RESONATOR-AMPLIFIER TYPES

For high-power uhf transmitters, the V-42 series comprises six 15-kilowatt amplifiers covering the entire uhf television band. Linear operation up to 12 kw sync output with 60 watts drive. Gain is 27 db.

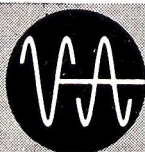
For high-power pulse transmitters the V-45 and V-82 in combination permit low-level crystal control with

peak power of 8 kw at 2½ per cent duty cycle. The V-45 is a 5 to 1 frequency multiplier (1862 to 9310 mc) operating at a resonator voltage of 700 v. The V-82 is a pulse amplifier with a high-level power gain of 57 db operating at 9310 mc with a resonator voltage of 18 kv. (Total output presently committed, delivery 1954).

Special Varian klystrons are regularly being engineered to meet unusual application requirements. New types are constantly being developed.

For more detailed information on Varian products write Section ADAX, Varian Associates, Palo Alto, Calif., or your nearest field engineering representative.

List of Field Engineering Representatives on Facing Page



VARIAN associates

FIELD REPRESENTATIVES IN 21 CITIES

Advertisers

How about the NUCLEAR field?

There are a good many advertisers using this BUYERS' GUIDE who should also be advertising in NUCLEONICS.

Particularly in instrumentation and laboratory equipment, there is a cross-over of use in the electronic and in the nuclear field.

But, there is very little cross-over in the subscriber lists of the two publications — a matter of a few percentage points.

It is quite possible that you are doing an effective presentation of your products and abilities in this excellent issue, but are missing such presentation before one of the fastest growing fields in the country's history — the field of atomic energy.

The sales representatives of ELECTRONICS are also the sales representatives of NUCLEONICS. They have much evidence pointing to the opportunities in this great NEW field. Ask them to show you what your potentials can be.

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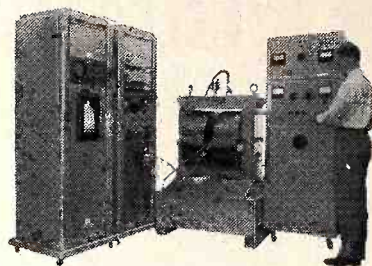
*By the
electronic
industry
itself...

NUCLEAR RESONANCE



HIGH-RESOLUTION SPECTROMETER

Research functions in the nuclear-resonance field are served by the Varian Model V-4300 High-Resolution Spectrometer capable of spectra identifications as illustrated below. These are derived from the variations in chemical bonding which result in slight shifts in the resonant frequency of the various protons present in a compound.



The standard instrument operates at a fixed crystal-controlled frequency of 30 mc and is used for studies of narrow lines, chemical shifts and fine structure in the resonances from hydrogen and fluorine nuclei.

VARIABLE-FREQUENCY SPECTROMETER

Varian Model V-4200 is also available. It operates over a range of frequency from 2 to 16 mc and with magnetic fields up to 14 kilogauss. This broad coverage permits observation of nuclear-resonance signals from practically every isotope possessing a finite magnetic moment.

HIGH-HOMOGENEITY ELECTROMAGNET

Large volumes of homogeneous magnetic field are provided for such applications as nuclear- and paramagnetic-resonance work, Zeeman studies, and beam deflection, by the Varian Model V-4012 Laboratory Electromagnet (center unit), which has 12-in. diameter pole pieces. Operating with a standard 1 1/4-in. air gap, the magnet provides a field uniform to at least 1 part in 50,000 throughout a

volume not less than 1 cu. in. With a magnet input of 4 kw, various pole configurations give a range of field from 7,000 to 37,500 gauss.

Other Varian magnets include the V-4008, an 8-in. pole-diameter electromagnet and the V-4007, a 6-in. unit, both similar to the Model V-4012, as well as several types of large laboratory permanent magnets.

POWER SUPPLIES AND ASSOCIATED UNITS

Special highly-regulated power supplies are available for magnet operation. Illustrated (right unit) is the Model V-2100 Power Supply which is capable of holding magnet current to 1 part in 10⁵ for a 10 per cent line-voltage change. This unit also features negligible long-time drift and circuitry for injection of (a) field sweeping voltages and (b) nuclear-

resonance field-regulating voltages.

Varian also manufactures the Model V-4400 Magnetic-Field Meter and Stabilizer which utilizes the gyromagnetic properties of atomic nuclei to reduce measurement of magnetic field to a direct measurement of frequency—simultaneously providing an error signal which can be used to activate field-stabilization equipment.

COMPLETE LABORATORY FACILITIES

Further advances in the art are being explored in the Varian Nuclear Resonance Applications Laboratory. This advanced facility is staffed with ex-

perienced chemists and physicists and fully equipped with the most highly developed instruments.

VARIAN FIELD ENGINEERING REPRESENTATIVES

- Bivins & Caldwell
High Point, North Carolina
- Burlingame Associates
Boston 16, Massachusetts
New York 13, New York
Philadelphia, Pennsylvania
Syracuse, New York
Washington 9, D. C.
- Alfred Crossley & Associates
Chicago 40, Illinois
Dayton 2, Ohio
St. Paul 14, Minnesota
- Harris-Hanson Company
St. Louis, Missouri
- Earl Lipscomb Associates
Dallas, Texas
Houston 5, Texas

- Arthur H. Lynch & Associates
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- Neely Enterprises
Albuquerque, New Mexico
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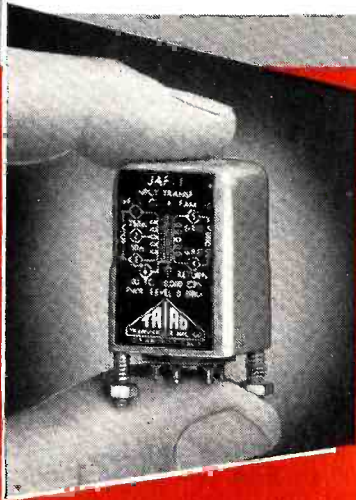
VARIAN associates

FIELD REPRESENTATIVES IN 21 CITIES

TRIAD

SUB-MINIATURE
HERMETICALLY
SEALED

transistor transformers



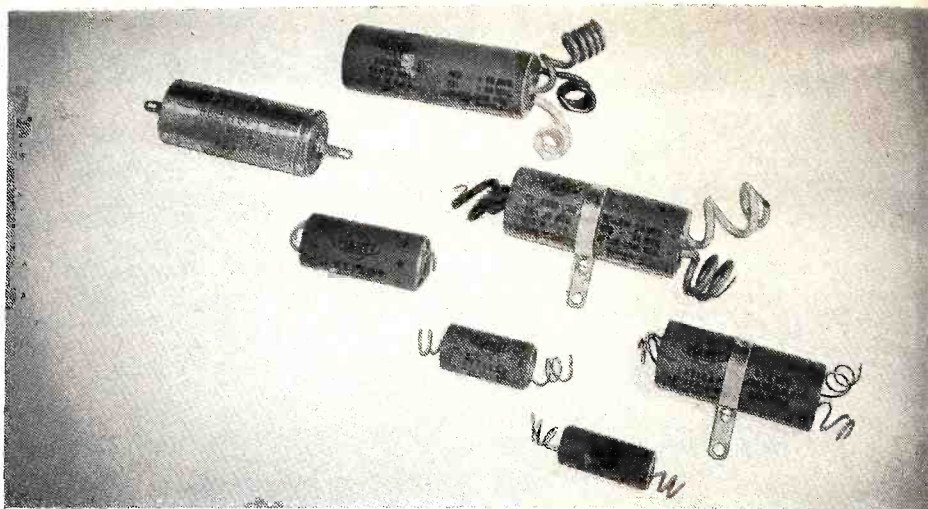
- standard MIL cases
- hermetically sealed
- magnetically shielded

Triad offers Transistor Transformers, both cased and uncased, for all applications in connection with both NPN and PNP type of transistors. Cased types are listed below. Dimensions, $\frac{3}{4}$ " x $\frac{3}{4}$ " x $1\frac{1}{8}$ ".

Type No.	Impedance		Max. Level-VU	Shielding db.
	Winding #1	Winding #2		
JAF-1	50000	600/250/50	10	45
JAF-2	250000	600/250/50	10	45
JAF-5	50000	30/12.4	10	45
JAF-11	50000	15000	10	45
JAF-21	15000	600/250/50	10	45
JAF-23	20000 C.T.	600/250/50	10	45
JAF-31	600/250/50	600/250/50	10	45
MS-71	10000	600/150	33	0

Triad's new 1953 catalog lists other transformers which can be adapted to transistor circuits.

Write for Catalog TR-53G



Planet Capacitors "Engineered for Quality"

1 year service guarantee

Custom engineered to your specifications or supplied from stock, Planet capacitors meet the highest standards of the industry. Every capacitor is tested mechanically and electrically throughout its manufacture.

This rigid system of quality control makes unconditional one-year guarantee possible. Making Planet capacitors correctly from start means reasonable prices too!

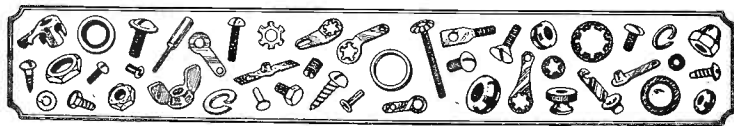
WRITE for Catalog 206-A, listing specifications on stock items.

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225 BELLEVILLE AVENUE
BLOOMFIELD, N. J.



HARDWARE for ELECTRONICS ... FASTENINGS ...



—WRITE for CATALOG—

Whatever your product may be, you are faced with the problem of locating numerous items that form an integral part of your production. Whether it's a screw—nut—washer—lug—grommet or any one of a myriad of parts, each can be a "goat getter" if not easily located.

We Carry in Stock: Screws—Nuts—Washers—Lugs—
Rubber Grommets—Rivets—Eyelets—Etc.—Etc.

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ELECTRONS, INCORPORATED

127 SUSSEX AVENUE

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*Inert gas rectifier and thyatron
tube specialists since 1928
Send for our "Engineering Manual & Catalog"*

PRECISION

Laboratory Equipment

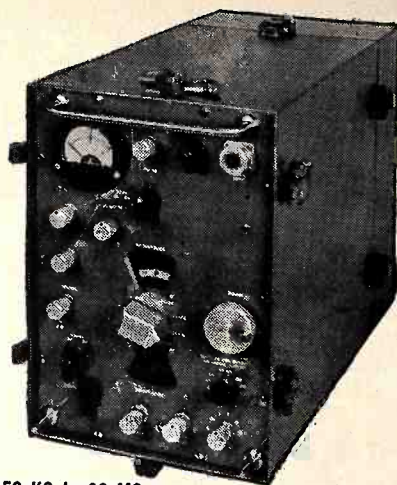
by **EMPIRE DEVICES**



20 MC to 1000 MC

NOISE AND FIELD INTENSITY METER MODEL NF-105

(Commercial equivalent of AN/URM-7)
Three quick-change tuning heads.
Single knob tuning for easy scanning.
Built-in impulse generator serves as calibrator.
Carrier and peak reading VTVM.
Aural slideback.
Coaxial step attenuators.
Regulated "A" and "B" supply.



150 KC to 80 MC

NOISE AND FIELD INTENSITY METER, MODEL NF-114

(Commercial equivalent of AN/PRM-14)
Eight band turret switch.
Two tuned RF amplifiers on all bands.
Built-in impulse generator.
Carrier and peak reading VTVM.
Aural slideback.
Dry batteries or 115 Volts AC operation.
Subminiature construction.

UHF IMPULSE GENERATOR MODEL IG-115

PULSE WIDTH: 0.0005 microseconds (5×10^{-10} seconds).

FREQUENCY SPECTRUM: 10 KC to 1000 MC, flat within $\pm 1/2$ DB.

OUTPUT LEVEL: 70,000 microvolts per megacycle bandwidth adjustable over a 70 DB range.



AT-50



AT-60

UHF ATTENUATORS MODELS AT-50, AT-60

50 ohm resistive T-networks of concentric line construction.

FREQUENCY RANGE:
AT-50: DC to 4000 MC.
AT-60: DC to 3000 MC.

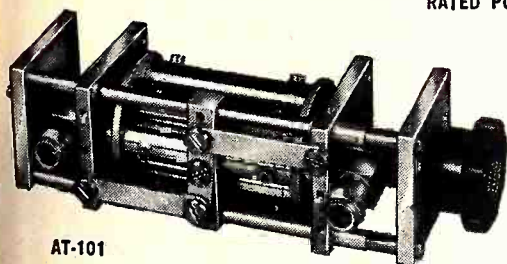
VSWR: Better than 1.1 at all frequencies.

ACCURACY: $\pm 1/2$ DB.

RATED POWER:

AT-50: 1 W continuous
1 KW peak

AT-60: 2 W continuous
2 KW peak



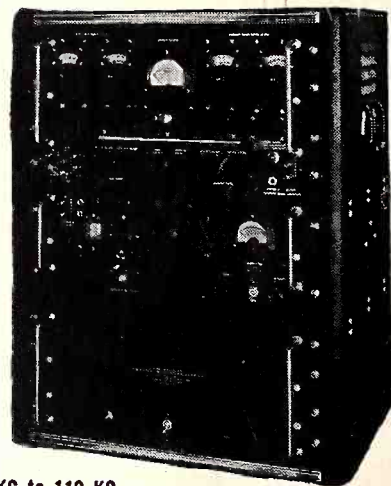
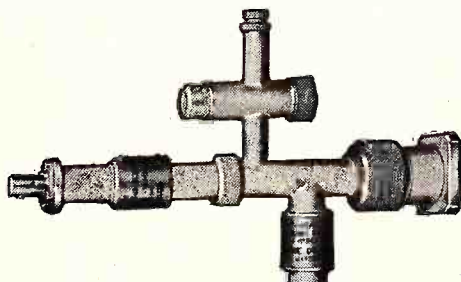
AT-101

STEP ATTENUATOR MODEL AT-101

Uses AT-50 pads in a six-step coaxial turret arrangement.

COAXIAL CRYSTAL MIXER MODEL CM-107

Broad Band, Fixed Tuned.
225 MC to 5600 MC in 8 models.
Input and L.O. VSWR better than 2- to 1.
L. O. rejection at IF output better than 30 DB.



4 KC to 110 KC

NOISE AND DISTORTION ANALYZER MODEL ND-110

BROAD BAND SENSITIVITY: -80 DBM.
NARROW BAND SENSITIVITY: -110 DBM.
Narrow band uses crystal lattice network for proper band pass characteristics.
Measures true RMS power of sine wave or complex signals.

Write for detailed engineering data to:

EMPIRE DEVICES

PRODUCTS CORPORATION
38-15 Bell Boulevard, Bayside 61, New York

Manufacturers of
NOISE METERS
DISTORTION ANALYZERS
IMPULSE GENERATORS
COAXIAL ATTENUATORS
CRYSTAL MIXERS





RESISTORS • FOCUS COILS DEFLECTION YOKES

Precision-built for critical electronics applications

Whatever your requirements for top quality wire-wound components, you can count on I-T-E. Power resistors, precision resistors, deflection yokes, focus coils—all I-T-E products are specially designed and

precision-built to meet critical commercial and government specifications. Broad engineering background, extensive production facilities, and close control assure *quality* components in any *quantity* you require.

I-T-E POWER RESISTORS

Non-hygroscopic ceramic foundations are in accordance with JAN specifications.

Purest resistance wires are uniformly wound to prevent shorted turns and excessive hot spots. All connections silver-soldered.

Vitreous enamel coating (organic if required) provides a glazed moisture-repellent surface with fast heat-dissipation qualities.

Advanced production methods assure high stability, long life.

Standard Tolerance: $\pm 10\%$, $\pm 5\%$ and less made to order.

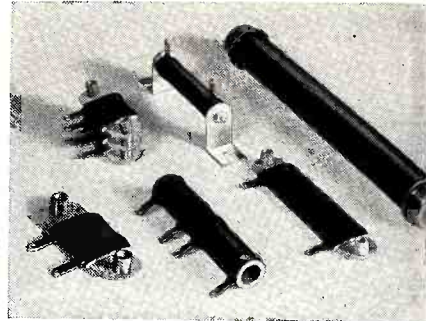
Standard fixed resistors:
5-200 watts

Adjustable resistors:
10-200 watts

Oval resistors:
30-75 watts

Ferrule resistors:
12-200 watts

Special resistors:
built to specifications



I-T-E PRECISION RESISTORS

High-quality wire alloys are used—free from internal stresses and strains.

Semi-automatic precision winding method assures even tension—eliminates hot spots.

Hermetic or vacuum-impregnated sealing for protection against destructive effects of sales, moisture, and atmospheric conditions.

Accelerated aging process prior to calibration assures accuracy.

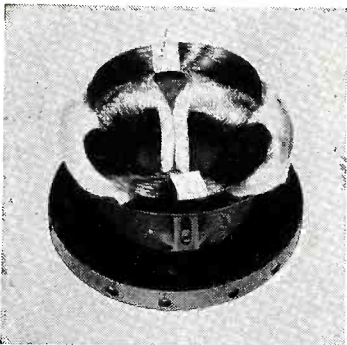
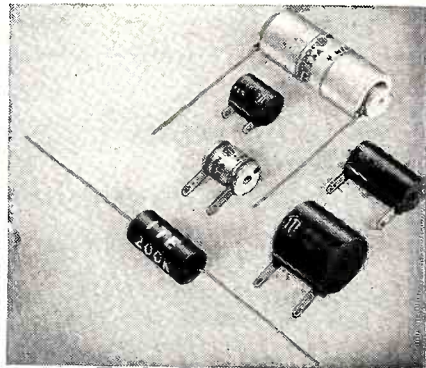
Critical quality control eliminates all resistors which do not come up to high I-T-E standards.

Standard Tolerance: $\pm 1\%$. Specified tolerances down to $\pm 0.05\%$.

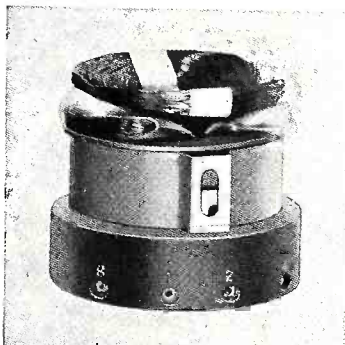
Type A: lightweight, hermetically sealed—for precision operation up to 125° C. Surpass JAN R-93, Characteristic A, and MIL R-93 A specifications.

Type B: vacuum-impregnated, moisture-resistant. For JAN R-93, Characteristic B, specifications.

Ratings from 0.01 ohm-10 megohms, 0.125-5 watts.



90° DEFLECTION. FLARED WINDINGS.



70° DEFLECTION. FORM-WOUND.

I-T-E DEFLECTION YOKES

Up to 90° deflection without neck shadow. Design allows $\frac{1}{8}$ " pullback on neck of TV tube.

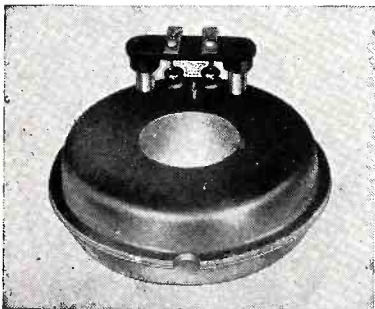
High sensitivity provides full deflection at low line voltages.

Full focusing for sharp horizontal and vertical focus. Excellent side and corner resolution.

Shrink-proof insulation between horizontal and vertical coils.

Minimum "pincushion" distortion—as result of special I-T-E coil design.

Thorough electrical and visual pretesting—for shorts, inductance, resistance, induced voltage, insulation breakdown, cross-talk.

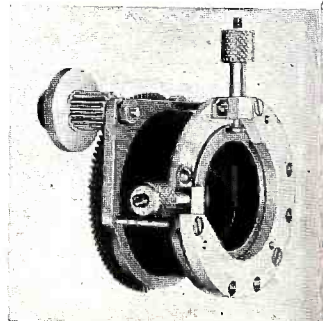


I-T-E FOCUS COILS

High quality focus coils—small, compact, lightweight. Precision-built to commercial or government specifications. For use with tubes up to 90° deflection. Minimum spot distortion. Retain proper focus over wide range of line voltage variations.

◀ **Hermetically-sealed electromagnet type** for government use. Meets MIL-T-27 specs. Precision-wound of fine, uniform copper wire. Sealed in nitrogen—for minimum temperature rise.

Permanent magnet type for government use. Meets MIL-T-27 specs. *Locked* controls assure uniform focus after severe shock and vibration. ▶



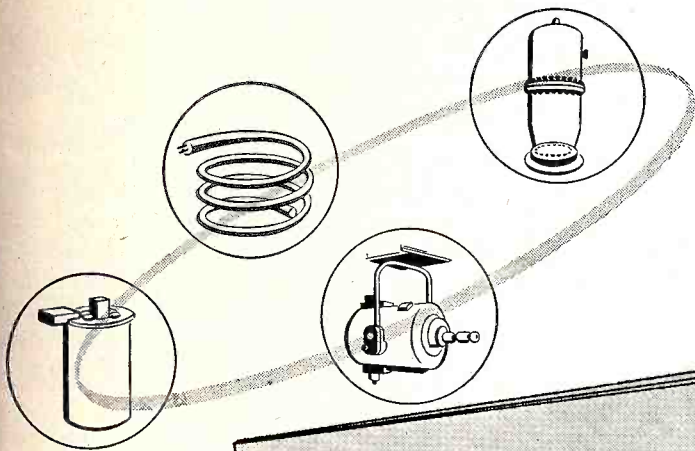
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RESISTOR DIVISION • I-T-E CIRCUIT BREAKER CO. • 1924 Hamilton St., Philadelphia 30, Pa.

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NEW TECHNICAL BULLETIN
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SULFUR HEXAFLUORIDE**

inert, non-toxic, dielectric gas



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Sulfur Hexafluoride**

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Oil- and gas-filled;
also dry types

**In CAPACITORS
& CONDENSORS**

In NUCLEAR RESEARCH
Van de Graaff
Electrostatic Generators
High Energy Positive-Ion
Accelerators

In X-RAY APPARATUS
For both large, high-
voltage, and small,
low-voltage equipment
used for diagnostic and
therapeutic purposes
For industrial radiography
High energy electron
equipment for sterilization
of pharmaceuticals and food

In ELECTRONICS
Co-axial cables for television,
etc. Radar equipment, wave
guides, similar apparatus



AN IMPORTANT NEW DIELECTRIC GAS,
General Chemical's Sulfur Hexafluoride is
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Hexafluoride to be superior to any other
available gaseous insulation from the
standpoint of dielectric strength, chemical
stability, and non-condensing characteris-
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TO HELP YOU KNOW MORE about this in-
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ment. The information in this bulletin may
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processes which you will want to investi-
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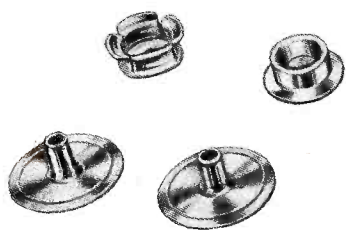
City _____ Zone _____ State _____

EL-6



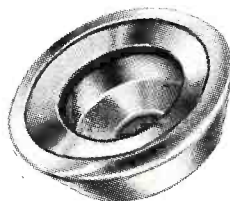
Allied
Chemical

Tailor-Made Fasteners in Volume Quantities



MINIATURE BATTERY CONNECTORS

For use with small "B" batteries; afford quick and positive polarized electrical connections and worthwhile space savings on such small equipment as portable radios or hearing aids.

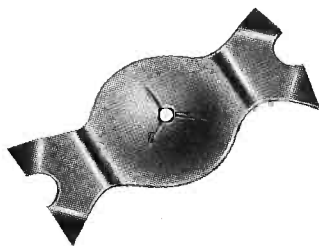


FEMALE ANODE CONNECTORS

Made from cold rolled steel and plated to specification; this part provides the high voltage connection to a metal picture-tube strap, or all other connections.

FISHTAIL RATCHET PLATE

Made in a wide range of sizes to hold on smooth metal, die-cast or plastic studs. For use on refrigerators, radio cabinets, washing machines and other products to hold medallions, nameplates, etc.



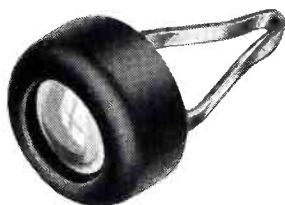
VIBRATOR GROUNDING FASTENERS

Holds 1½" dia. beaded or non-beaded vibrator in any position to radio chassis. Vibrator Can grounded to frame. Holding prongs designed to hold several types of Cans.



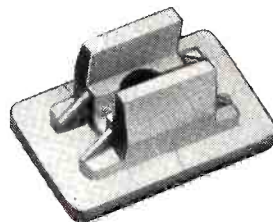
NYLON SNAP-IN NUT

Designed for the attachment of shelf supports or channels to porcelainized sheet metal line. Used with sheet metal screws they provide high pull-values and no chippage.



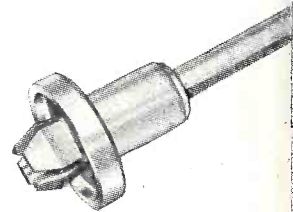
RUBBER FOOT

Snap-in Rubber Foot for Record Changers and Phonograph Mountings eliminates threaded member, lock washer and nut thereby speeding assembly time and reducing costs.



SHELF SUPPORTS

Plastic Shelf Supports designed to snap into porcelainized hole. Driven pin expands Trimount section securing fastener without porcelain chippage. Variety of shapes and sizes.



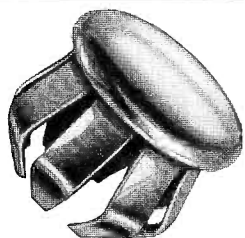
INDICATOR-LIGHT PLUG BUTTONS

Snap-in type for electrical appliances. Removable. Jeweled or plain glass. Some plastic. Designed in a wide range of colors, shapes and sizes.



PLUG BUTTONS

Made to snap into hole sizes 1/8" to 3". Can be embossed with ornamental or functional designs. Removable. Supplied with various finishes, in a variety of shapes and sizes.



TUBING AND WIRING CLIPS

For use in electrical and hydraulic systems. Holds wires and tubing firmly, without chafing, under extreme vibration. Made in hundreds of sizes.

TRIMOUNT STUDS

Designed to hold two or more thicknesses of material together. Easily installed by hand. Insure vibration proof attachment. Permanent or removable attachment. Wide variety of shapes and sizes.



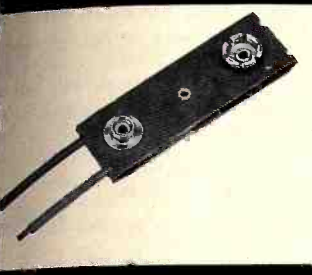
DOT

Parts illustrated are representative of the thousands of different specialized fasteners and allied devices designed and manufactured in volume by United-Carr and its subsidiaries for leading manufacturers of electronic equipment. United-Carr's wide and varied experience with special fastening problems in the automotive, aviation and appliance fields provides an unequalled background of technical knowledge which may well be applicable to your special needs.

UNITED-CARR
FASTENER CORP.

CAMBRIDGE 42, MASSACHUSETTS

Ucinite Electrical Assemblies



BATTERY CONNECTORS

Wired snap-on units for use with batteries equipped with United-Carr electrical snap fasteners. Wiring to customer's specifications.

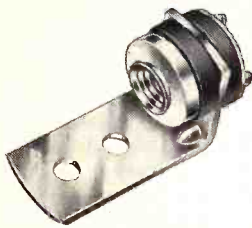


BANANA PINS

Four sizes of plugs with one-piece beryllium copper springs. Adaptable mounting ends in threaded, staking, or solder lug types. Similar Mating Jacks also available.

SHOCK MOUNTS

Offered in several sizes—brackets and durometer of rubber bushings can be varied. With threaded Teenuts or plain bushings. Insulated versions if needed.



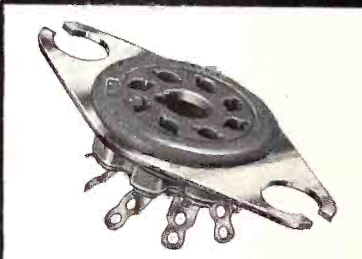
ANODE CONNECTORS

Plug button contacts for positive, firm connections. Corona resistant neoprene or silicon shields in straight or right angle types. Wiring to customer's specifications.



TUBE CAPS

Positive gripping, heat treated steel springs in corona resistant metal housing. Insulated or non-insulated. Wired to specifications. Type shown has silicon shield for special application.

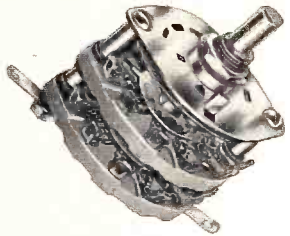


TUBE SOCKETS

Ceramic octals and special types. Ring or saddle mounting. Open ended plates for shock mounting with rubber grommets. J A N types.

SWITCHES

Slack type switches manufactured as a licensee. Variety of rotary and push-button assemblies to specifications.



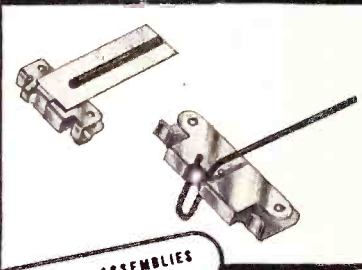
SNAP SWITCHES

Precision, momentary contact push-button switches. Small and dependable. Several circuit arrangements. Water tight version shown.



TEST JACK

Ucinite's quality jack for .080 probes. Beryllium copper contacts. Nylon insulation in colors. Metal shell for firm dependable mounting.

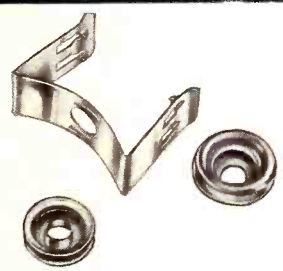


POINTERS

Slide pointers. Two sizes of carriages adjustable to variations in rails and adaptable to any indicator design.

METAL STAMPINGS

Volume production in Metal stampings. Years of engineering and tooling skill available to solve your particular problem.





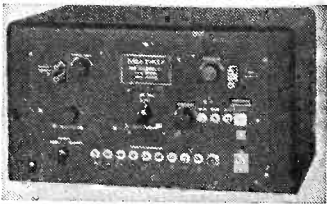
With years of specialized experience in the electronics field and complete facilities for the volume production of small metal stampings as well as the assembly of metal to plastic and ceramic components, Ucinite is fully equipped to supply you with special electrical parts and assemblies... designed, assembled, wired and marked to your specifications. For complete design, engineering and production service, call your nearest Ucinite field engineer.

The UCINITE Company

DIVISION OF UNITED-CARR FASTENER CORP.

Newtonville 60, Massachusetts

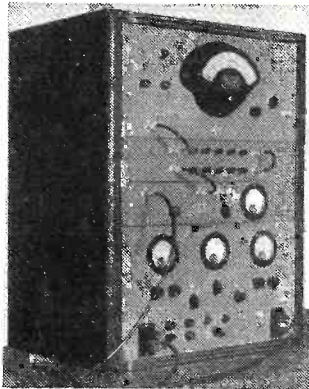
LF... HF... UHF... Microwave Test Equipment



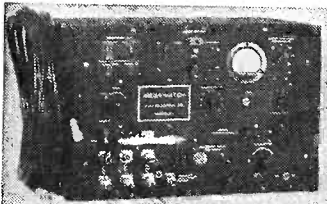
RADA-SWEEP: An all Electronic sweeping oscillator for use in aligning radar IF strips. Swept by symmetrical sawtooth also used for sweeping the oscilloscope. Marks individually switched on or off. Separate attenuators used on pip marker and high frequency outputs. True zero level reference

baseline provided on scope display.
 CENTER FREQ... Switchable to 30 or 60 mc—Others to order
 SWEEP WIDTH... Switchable to 3 or 20 mc
 MARKERS... Narrow pulse type crystal positioned at 25, 35, 55, 65 mc
 PRICE... \$395 with marks as above. Marker frequencies changed or added on special order.

THE MICROWAVE GAIN SET. (for use down to VHF): A complete system for making precision measurements of gain or loss in microwave components or systems. The IF amplifier-metering portion, available separately as the Model 620-A Amplifier-Detector Set, having an input frequency of 70 mc., may be used with other signal sources and local oscillators to provide measurements down to the VHF range. It consists of a pre-amplifier, calibrated attenuator, amplifier-detector and power supply. The 500-A Double Klystron Power Supply and "Centilators", Microwave Signal Sources, both optional, are also available. With its high gain and ultimate accuracy, the Set is capable of accurate loss measurements in the vicinity of zero loss, as well as where losses are as great as 80 db.



READABLE to 0.025 db
 ACCURACY within 0.1 db of attenuator calibration.
 MEASUREMENTS with available power as low as -80 dbm.
 AVAILABLE with or without RF-HEADS. May be used in conjunction with signal source and local oscillator for any frequency range.
 EXTREMELY well regulated to prevent disturbance of measurements due to drift of gain or tuning.
 PRICE—Model 620-A Amplifier-Detector Set...\$2,250



MEGA-MATCH: Displays reflection coefficient over wide frequency range. Measures reflected energy. Used for designing broad band antennas and matching transformers, checking impedance matching of TV RF

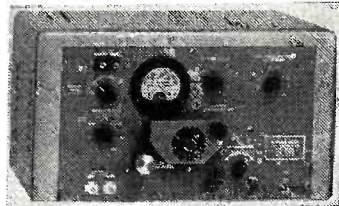
transformers and tuners, and measuring transmission line terminating impedances.
 FREQ. RANGE... 10 to 1000 mc FREQ. SWEEP... To 30 mc in width
 SENSITIVITY... Reflection coefficients down to approx. 0.01 up to 500 mc and 0.1 from 500 to 1000 mc can be seen. PRICE...\$895

MICROWAVE MEGA-MATCH: Same function as Mega-Match, except frequency range is 8500 to 9700 mc., and 1" x 1/2" X-band waveguide is used for the delay system. PRICE...\$895



MEGA-PULSER: Provides a source of very narrow pulses for use in testing the transient response of wide-band circuits and the correctness of termination of transmission lines. 3 different pulse repetition rates and 4 different pulse widths for wide band video amplifier transient response studies. Operates with internal or external triggers.

OUTPUT PULSES:
 AMPLITUDE... Approx. 150v pos. or neg.;
 WIDTH... 0.025, 0.05, 0.1, 0.25 micro-sec.;
 REPETITION RATES... 100, 1000, 2000 pps.;
 IMPEDANCE LEVEL... 53.5 ohms
 RISE AND DECAY TIME... Approx. 0.01 micro-sec.;
SYNCHRONIZING PULSES:
 AMPLITUDE... Approx. 50v pos. or neg.;
 IMPEDANCE LEVEL... Approx. 250 ohms;
 TIMING... Synchronizing pulses precede output pulses by 0.25 micro-sec.
 PRICE...\$195



CALIBRATED MEGA-SWEEP: The widest range sweeping oscillator available. Covers approximately 50 kc to 900 mc with maximum sweep rate of at least 30 mc.

SINGLE CONTROL TUNING... 50 kc to 900 mc
 SWEEP WIDTH... continuously variable 0 to 30 mc
 SAWTOOTH SWEEP... no phasing
 PRICE...

MEGA-SWEEP: An alternate model of the above with many of the same features except that it lacks single dial tuning and direct indication of approximate output center frequency. PRICE...

111-A CALIBRATED MEGA-SWEEP: Provides much higher sweep width to 40 mc, and same general features as Calibrated Mega-Sweep. Includes blanking for zero level baseline. Frequency range and output as follows:

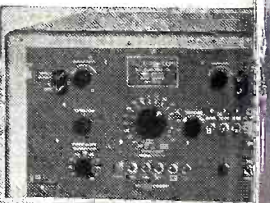
Frequency Range	Output Impedance	Output Voltage (In)
1. 10 mc—950 mc	70 ohm unbalanced	0.15 Volts
2. 450 mc—900 mc	300 ohm balanced	0.3 Volts

Price...\$575

Model Video MARKA-SWEEP: All electronic video sweep oscillator. Crystal positioned marks of pulse type provided at 1, 2, 5, 10, 15 and 20 mc are fed directly to the oscilloscope. By use of external signal generator a variable frequency pulse type marker is available. Output max. is 0.3 v. from a 72 ohm internal impedance.
 SWEEP RANGES... 50 kc to 5 mc, 50 kc to 10 mc, 50 kc to 20 mc
 SAWTOOTH SWEEP... Sweeps video output and deflects oscilloscope horizontal axis.
 Zero level baseline provided on oscilloscope PRICE...\$495



KILO-SWEEP: Applies sweep generator techniques of visual alignment to the 50 kc to 2 mc frequency range. Simplifies and speeds adjustment of high fidelity receivers and high selectivity intermediate frequency amplifiers in communication receivers. Sweep width control allows continuous adjustment of width up to a maximum of 100 kcs.
 SWEEP... All electronic, linear symmetrical sawtooth. Sweep rate adjustable.



MARKERS... Up to 6 crystal positioned pulse type marks fed to scope vertical amplifier. 3 located at 0.5, 1, and 2 mc. Others specified by purchaser.
 ZERO LEVEL BASELINE... Produced on oscilloscope pattern.
 ATTENUATORS: Individual switched... 20, 20, 10 db
 Continuous... Approximately 20 db PRICE...

SONA-SWEEP: Very similar to Kilo-Sweep. Frequency range and sweep width adapt it to measurement and alignment of ultra high frequency amplifiers in Sonar and carrier-current communication systems. Adapted to work on high Q systems, since sweep rate is variable to below 5 cps. Coverage from 5 to 200 kc. with maximum sweep rate of 20 kc. Supplied with crystal marks at 5, 10, 15, 20, and 200 kc. PRICE...\$525

MICRO-PULSER: Provides rectangular pulses over a wide range of repetition rates. Feeds radar systems and components, transient response of video amplifiers and other electrical systems. Has variable delay between synchronizing pulse and output pulse. Pulse output may be used to pulse modulate an RF carrier to obtain a signal for testing transient response of high frequency band amplifiers. PRICE...\$195

Industrial Instruments... Production Test Equipment

TELEVISION PRODUCTION TEST EQUIPMENT



Model RF-P MARKA-SWEEP:

All electronic switchable TV sweep generator with narrow sweep markers not affected by receiver alignment. 15 mc wide sweep and narrow crystal positioned markers at picture and sound carrier frequencies on each of 12 VHF channels. IF band included. Output 70 ohms unbalanced and 300 ohms balanced (with matching device supplied).
PRICE...\$795

Model IF MARKA-SWEEP: An all electronic switchable IF TV sweep generator covering all present ranges. Includes crystal positioned sweep type markers not affected by receiver. For dual IF or intercarrier receivers. Generally similar to Model Video. PRICE...\$295. Crystal marks (up to 9) \$15.00 each extra.

MEGA-PIX: A crystal controlled television picture and sound RF signal source. Requires composite video signal. Provides output on all 12 channels for complete production line testing. PRICE...\$990

ULTRA-SWEEP: A precision UHF Sweeping Oscillator providing unusually high output. Designed for the production line testing of UHF TV receivers and tuners, as well as general laboratory applications. For information regarding markers, please contact the factory.

FREQUENCY RANGE... 450 mc to 900 mc Price...\$650
SWEEP WIDTH... Continuously variable from 0 to 50 mc
OUTPUT... 5 volts into 75 ohms terminated. ZERO LEVEL BASELINE produced on oscilloscope pattern

ATTENUATORS...
Switched: 20 db, 20 db, 10 db, 6 db, 3 db Continuous: Approx. 3 db
DETECTOR... built in

OTHER EQUIPMENT



MICROWAVE MEGA-NODES: Sources of random noise provided in six waveguide sizes. May be used for measurement of noise figure, receiver gain and calibration of standard signal sources. Noise figure obtained by comparing noise output of a system with the amount of noise introduced by the instrument. Particularly useful for checking over-all performance in radar systems. Available in following waveguide sizes covering following frequency ranges:

RG 69/U — 1200 to 1400 mc RG 49/U — 3950 to 5850 mc RG 51/U — 7050 to 10,000 mc
RG 48/U — 2600 to 3950 mc RG 50/U — 5850 to 8200 mc RG 52/U — 8200 to 12,400 mc

NOISE OUTPUT (ALL GUIDES): 15.8 db ± 0.25 db



MEGA-NODE SR.: A calibrated random noise source providing output over a wide frequency and power range. Used in measuring noise figure, receiver gain, and for voltage calibration of standard signal sources. Reads noise figure directly without band width computation.

FREQ. RANGE... 100 mc to 3000 mc
OUTPUT IMPEDANCE... 50 ohms
Unbalanced
NOISE FIGURE RANGE... 0 to 20 db

METER CALIBRATION:
Linear in DB noise figure
PRICE...\$995

VIBRALYZER: Analyzes signals in the 5-4400 cps region in 3 frequency ranges, with broad and narrow analysis filters on each range. For studies of transient and steady state vibration signals on aircraft, ships, rotating and reciprocating machinery. Directly writes analysis results on non-photographic recording paper. PRICE...\$2500

SONA-GRAPH: Three dimensional or Fourier Analysis of transient or steady state signals 80-8000 cps on non-photographic recording paper.

SONALATOR: Three dimensional display on oscilloscope of audio or impulse wave 100-4000 cps.

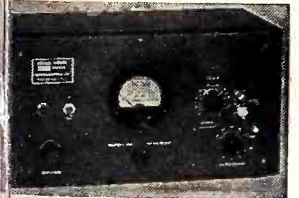
SONA-STRETCHER: Slows time scale of recorded speech to one-half without change in frequency distribution.

SONACTOR: Speech pitch extractor with visual display for all normal voices.

ATTENUATORS: Models 20 and 21 HF switchable attenuators.
FREQ. RANGE... dc to 500 mc
INPUT & OUTPUT IMPED... Model 20—53.3 ohms; Model 21—70 ohms
ATTENUATION... 41 db in 1 db steps; 10 db fixed.
ACCURACY... 0.1 db per db of attenuation at 500 mc.

WAVEMETERS: A high-Q micrometer-controlled coaxial X-band wavemeter. 8500 to 9700 mcs.

NOTE: All prices are F.O.B. factory and may change without notice.



Read directly from meter of the MEGA-NODE.
FREQ. RANGE... 5 to 220 mc
OUTPUT IMPEDANCES:
Unbalanced... 50, 75, 150, 300, Infinity
Balanced... 100, 150, 300, 600, Infinity
PRICE...\$295

MEGA-NODE: A calibrated random noise source providing selection of several output impedances with balanced or unbalanced output. Used in measuring noise figure, receiver gain, and for voltage calibration of standard signal sources. Noise figure obtained directly from meter of the MEGA-NODE.

NOISE FIGURE RANGE:
0 to 16 db at 50 ohms
0 to 23.8 db at 300 ohms
METER CALIBRATION:
Linear in DB noise figure.

ANALYZER, WIDE BAND: A high resolution tachometer that accurately measures average speed and slow or fast variations in that speed. To study hunting in synchronous motors, oscillations and torsional vibrations in coupled shaft systems, the effect of flywheels, clutches, etc. With a follower wheel it measures linear speeds of belts, wires, rolled products, etc. Excellent transducer for "rate" systems. Covers range of 500 to 9000 r.p.m., can be extended.
PRICE...\$1950 complete with oscilloscope.

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Send for Kay Electric Company's "Electronic Instruments" brochure or write for full specifications and prices on any of the above instruments.



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✓ OVERLOAD TRIP LIGHT DUTY



✓ HERMETICALLY SEALED



✓ MIDGET LATCHING RELAY



✓ RADIO AND HIGH VOLTAGE



✓ ANTENNA TRANSFER



✓ MULTIPOLE RELAY



✓ MIDGET RELAY

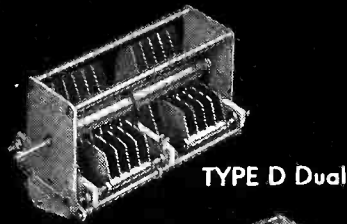


✓ CIRCUIT CONTROL

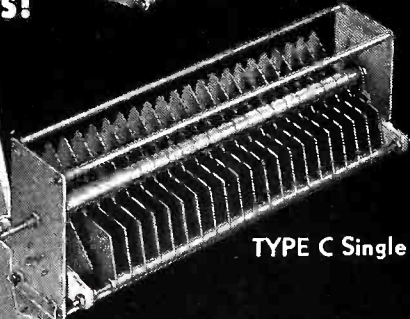
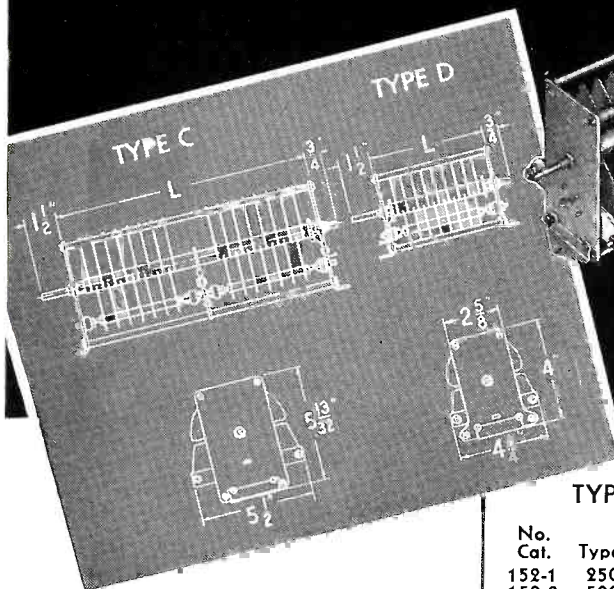
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TYPE D Dual



TYPE C Single

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CONSTRUCTION

Heavy aluminum end frames, .051" plates and 5/16" tie rods assure extreme rigidity. Rotor contacts are laminated phosphor bronze. Dual models have center rotor contact for electrical symmetry. Low-loss Steatite insulators are located outside the most intense RF fields and used solely to support stator assemblies. Shafts are 1/4" diameter, cadmium plated with 3/4" rear extensions.

Mounting brackets furnished for normal or inverted mounting. End frames drilled and tapped for panel mounting, special brackets or mounting of accessory components.

SPECIAL TYPES

Variations from standards such as special capacitances, ball bearings, dynamically balanced rotors, stainless steel shafts and right angle drive duals can be furnished in production quantities.

TYPE C SINGLE SECTION

No. Cat.	Type No.	Cap. per Sect. Max. Min.	Number Spacing Plates	Number L
152-1	250C70	252 34	.175" 24	6 13/16"
152-2	500C70	496 56	.175" 47	12 3/16"
152-3	250C90	245 45	.250" 31	12 3/16"
152-4	350C90	337 63	.250" 43	14 27/32"
152-5	50C110	51 19	.350" 8	4 25/32"
152-6	100C110	103 30	.350" 17	8 19/32"
152-7	250C110	251 66	.350" 41	18 3/32"
152-8	50C130	51 24	.500" 10	7 11/16"
152-9	100C130	102 42	.500" 21	13 11/32"

TYPE C DUAL SECTION

152-501	200CD45	204 21	.125" 15	8 19/32"
152-502	300CD45	290 26	.125" 21	10 5/16"
152-503	200CD70	198 27	.175" 19	12 3/16"
152-504	300CD70	305 37	.175" 29	16 25/32"
152-505	150CD90	147 30	.250" 19	14 27/32"
152-507	50CD110	50 18	.350" 8	10 5/16"
152-509	100CD110	103 32	.350" 17	16 25/32"
152-510	50CD130	51 24	.500" 10	14 27/32"

TYPE D SINGLE SECTION

153-2	100D35	99 14	.080" 8	2 29/32"
153-4	250D35	252 24	.080" 20	4 25/32"
153-6	500D35	496 36	.080" 39	6 25/32"
153-7	100D45	104 19	.125" 12	4 25/32"
153-8	150D45	146 23	.125" 17	4 25/32"
153-9	50D70	51 17	.175" 7	2 29/32"
153-10	70D70	72 18	.175" 11	4 25/32"
153-11	100D70	98 23	.175" 15	4 25/32"
153-12	150D70	151 31	.175" 23	6 15/16"
153-13	250D70	244 45	.175" 37	10 5/16"
153-14	350D70	351 62	.175" 53	13 11/32"
153-15	50D90	53 20	.250" 10	4 25/32"
153-16	70D90	73 25	.250" 14	5 13/16"
153-17	100D90	99 30	.250" 19	7 11/16"
153-18	150D90	149 43	.250" 29	10 5/16"

TYPE D DUAL SECTION

153-501	100DD35	95 13	.080" 8	4 25/32"
153-502	150DD35	147 15	.080" 12	5 13/16"
153-503	200DD35	202 19	.080" 16	7 11/16"
153-504	300DD35	291 24	.080" 23	9 15/32"
153-505	50DD35	496 38	.080" 39	13 11/32"
153-506	150DD45	155 24	.125" 18	9 15/32"
153-507	200DD45	198 27	.125" 23	12 3/16"
153-508	50DD70	52 15	.175" 8	5 13/16"
153-509	70DD70	72 17	.175" 11	7 11/16"
153-510	100DD70	97 22	.175" 15	9 15/32"
153-511	150DD70	151 31	.175" 23	13 11/32"
153-513	50DD90	52 19	.250" 10	9 15/32"
153-514	100DD90	97 30	.250" 19	14 27/32"

For complete information on other types of JOHNSON variable capacitors, write for your copy of General Products Catalog 973



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Ready reference throughout the year... this Mid-June issue of electronics serves the industry in the exacting manner that it requires.

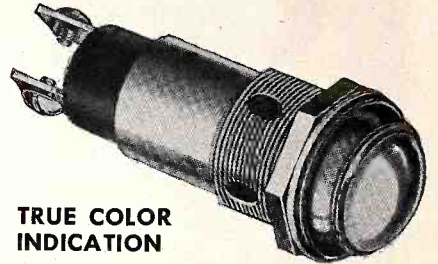
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All the qualities needed for clear, positive indication are available in all Johnson Pilot Lights. Furnished from stock with full or controlled brilliance; faceted or smooth jewels, plain or frosted. Colors are clear, red, green, amber, blue or opal.



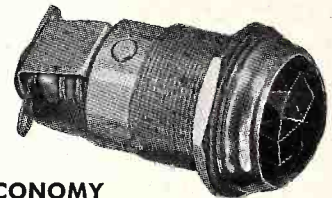
TRUE COLOR INDICATION

147-1034 UL Approved. Internally frosted jewel with plastic backing color disc eliminates false indication from external light. Color does not appear until lighted. Disc may be specially imprinted and arranged for continuous visibility or only when lamp is lighted.



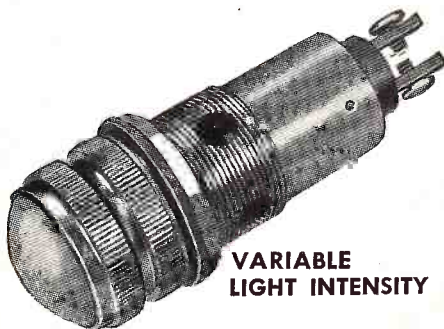
WIDE ANGLE

147-1220 UL Approved. For economical, continuous operation with neon or low powered incandescent bulbs. Double contact bayonet base contains series current-limiting resistor. Red, amber or clear Lucite cap transmits light with good efficiency.



ECONOMY DETACHABLE SOCKET

147-800 Chrome plated friction jewel holder. Lamp replaceable from front or rear of panel. Socket detachable from panel bushing. Insulated solder terminals. For miniature screw, candelabra screw or bayonet based bulbs.

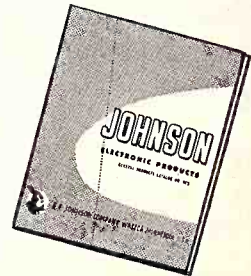


VARIABLE LIGHT INTENSITY

147-1519 Camera type shutter. Rotation of jewel head varies light from full brilliance to off. Uses G6 double contact bayonet based bulb. Other types available with polarized discs for light variation.

Send for Catalog 973

Select Pilot Lights exactly suited to your needs from the complete Johnson line. Write us your requirements and we will be glad to suggest suitable selections.



E. F. JOHNSON COMPANY

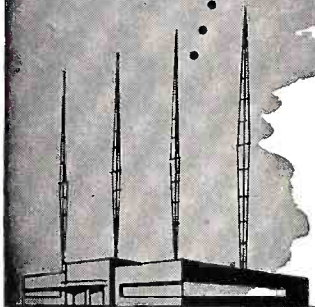
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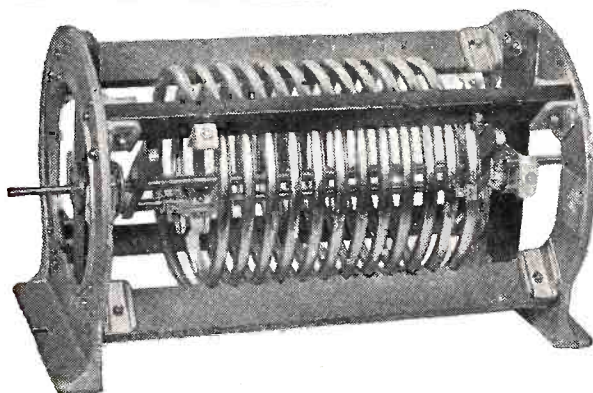
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JOHNSON variable inductors

for **RF** power applications.



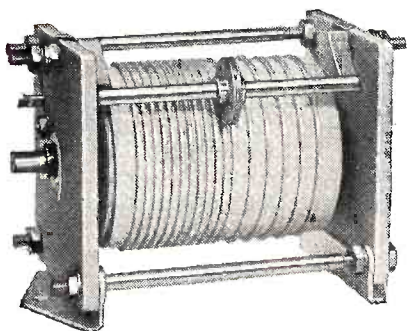
To meet the needs of RF power equipment manufacturers, JOHNSON builds a most diverse line of variable inductors. These range from 3 to 50 amperes current capacity, inductance to 300 microhenries in standard types. Characteristics of all models are: high frequency insulation grade L4 or better, low contact resistance, rigid construction. Two typical examples of JOHNSON variable inductors are:



224-2-1

Variable inductor for high power applications. Winding is $\frac{1}{2}$ " copper tubing rated to 50 amperes current. Inductance continuously variable to 16.5 microhenries. Spring loaded silver plated roller contact permits adjustment with full power applied. Insulators are glass bonded mica; cast aluminum end frames are slotted to minimize Eddy current losses. Overall di-

mensions: length $21\frac{1}{8}$ ", width 9", height 9". Available in eight standard models, maximum inductances 10 thru 110 microhenries. Variations from standard units such as special inductances, dual inductors for push-pull applications can be readily furnished in production quantities.



229-201

10 microhenry rotary inductor for 100 watt applications. Winding is #14 tinned copper wire with variable pitch for efficient extended frequency range. Beryllium copper tension springs maintain rolling contact. Overall size: length $4\frac{1}{2}$ ", width $2\frac{1}{2}$ ", height 3". Other inductors in the same series utilizing #12 and #16 tinned copper windings, maximum inductance 37 to 300 microhenries.

In addition to these illustrated types, the JOHNSON line includes many other variable and fixed inductors for low, medium and high power applications. Fixed inductors are available with single or multiple windings, fixed or variable coupling windings and with electrostatic shields.

For further information on all types of JOHNSON inductors, write for catalog 973—yours on request.



E. F. JOHNSON COMPANY

CAPACITORS, INDUCTORS, SOCKETS, INSULATORS, PLUGS, JACKS, DIALS, AND PILOT LIGHTS

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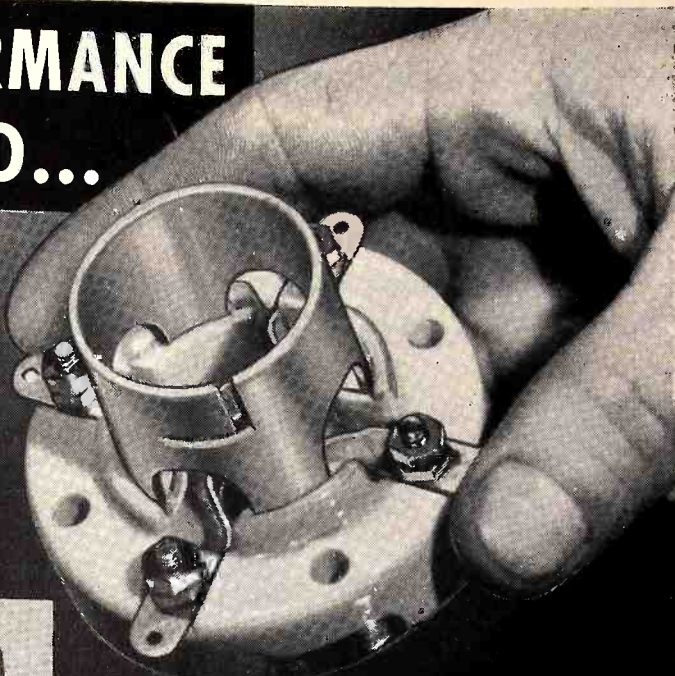
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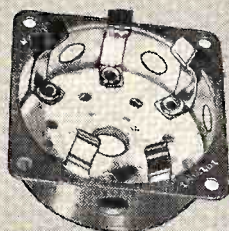


JOHNSON SPECIAL SOCKETS

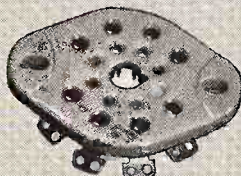
*Engineered for longer life
Designed for top performance*

JOHNSON electrical components include a complete line of special sockets for virtually every electronic application. Engineering skill, the result of years of specialized experience, and the most modern manufacturing facilities assure you of stock or custom-fabricated sockets that are both durable and dependable.

The special sockets shown here, variations of JOHNSON standard types, were designed to meet the punishing requirements of the 100 hour salt spray test. Construction successfully resists salt water corrosion, moisture condensation, and fungus growth; all contacts and contact springs are heavily silver plated to insure low loss and a positive electrical connection. Terminals are hot tin dipped, bases are of grade L-4 Steatite insulation with glazed top and sides. To provide added protection, all other surfaces are DC-200 impregnated.



122-101-14



122-217-8



122-211-14

122-101-14—Designed for Septar base tubes such as the 826, 829, 832, etc., this special socket has an anodized aluminum shell and provision for mounting mica button capacitors directly to the socket base. Five nickel plated, phosphor bronze retaining springs hold tubes securely in place and permit trouble-free operation in any position. A recessed base, solidly mounted on fungus resistant, phenolic washers, positively eliminates any contact movement.

122-217-8 thru 122-228-8—A series of ceramic wafer sockets designed to accommodate standard receiving tubes. Locating grooves speed tube insertion . . . beryllium copper retaining springs hold tubes firmly in place. Recessed phosphor bronze contacts

prevent movement; countersunk rivets and boss located mounting holes permit sub-panel mounting.

122-211-14—A bayonet type socket for all tubes equipped with "50 watt" bases. Double beryllium copper filament contacts (.0005" silver plated), and hot tin dipped integral solder terminals insure positive contact with a minimum loss. Brass shell is .0003" nickel plated—ceramic base extends beyond contacts, increasing breakdown voltage rating.

JOHNSON special sockets, made to order in production quantities, meet all JAN material specification requirements. The complete JOHNSON standard socket line is listed in catalog 973, available on request.

Inquires are invited, and wherever possible we will gladly quote on "specials" to meet military requirements.



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CAPACITORS, INDUCTORS, SOCKETS, INSULATORS, PLUGS, JACKS, DIALS, AND PILOT LIGHTS

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Simplify the purchase of laminated and molded plastics for your electrical insulation requirements, by calling on C-D-F first. Here under one progressive management are the technical and production facilities required to deliver the goods without question, without fail.

From Vulcanized Fibre to Teflon, from the world's largest Dilecto tube to the smallest washer, C-D-F's fabrication know-how can save your time and money. Large, modern plants staffed by skilled technicians, alert, helpful sales organization.

VULCANIZED FIBRE

SHEETS • TUBES • RODS • RECEPTACLES



Vulcanized Fibre made from pure cotton rag paper, chemically treated so that fibres adhere completely and form a permanently solid mass, is an inexpensive, lightweight, electrical insulator of great mechanical adaptability. This hard, bone-like material is tough, resilient and strong. Its great physical strength, high dielectric strength coupled with arc resistance, arc quenching characteristics and adaptability to machining and forming operations have found for it many applications in modern industry.

Machining and punching of fibre are economical operations. Many C-D-F Vulcanized Fibre grades may be readily drawn and formed into a variety of shapes. Repeated moistening and drying during fabrication does not alter the nature or quality of the material.

C-D-F Vulcanized Fibre . . . it's new and yet old and reliable . . . always low-cost and available.

3 IMPORTANT SHEET GRADES WITH GOOD INSULATING QUALITIES

BONE . . .

A high density (1.40 specific gravity) hard material used for intricately machined parts where dimensional changes must be minimized. Has high mechanical strength, resistance to wear and compressibility. Used in a wide variety of electrical applications where the operating voltage does not exceed 250 volts. Particularly recommended for applications requiring good wear and arc resistance.

THICKNESS	SHEET SIZE
1/32 to 3/16"	46" x 70"
Over 3/16 to 5/8"	48" x 80"

COMMERCIAL . . .

A tough, pliable, strong material for general use. Has medium density, with good mechanical properties and high dielectric strength under dry conditions along with excellent punching and machining characteristics. This fibre can be used and formed into thousands of low-cost, dependable components.

THICKNESS	SHEET SIZE
.004 to 2"	48" x 84"

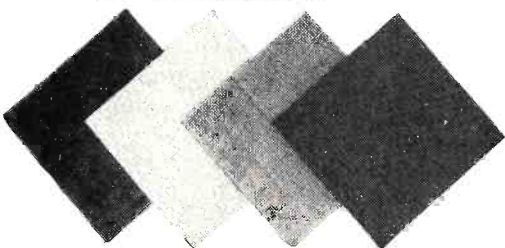
DIAMOND INSULATION . . .

A hard-surfaced chemically treated insulating paper (Fish Paper). Easy to bend, firm punch. Has high dielectric strength, stands extreme bending without cracking. Free from metallic particles. Rolls and ribbon rolls for automatic machines made up to 1/16" thick in various widths to order.

THICKNESS	SHEET SIZE
.004 to 1/8"	48" x 84"

DILECTO

SHEETS • TUBES • RODS • COLD FORMED PARTS



POST-FORMING Certain Dilecto grades (CF-1, XF, GB-SF, MEC-1F) may be formed to special shapes by heating and placing in an inexpensive cold mold. The thermoelastic properties of these Dilecto laminates open many production and design opportunities. Already widely used by the aircraft industry, Post-Forming Dilecto merits full investigation by every alert manufacturer. Write for complete C-D-F engineering service.

DILECTO ROLLED OR MOLDED TUBING finds wide usage in radio and electrical equipment because of excellent insulating and mechanical properties. Impregnated paper or fabric is rolled on a mandrel between heated pressure rolls, then oven baked or press cured in a heated mold to set up the resin.

MICABOND

Only the finest mica splittings are used in Micabond tapes, plates, tubes and fabricated parts. They are placed for completely leak-proof coverage, with strong binders used. Available in a wide range of sizes with many different backings including fiberglass, silk, cellophane, cotton and paper.

New . . . Silicone Bond Tape. Fiberglass one or both sides of Class H insulation. This inorganic tape withstands temperatures from 50° to 75° C. higher than Micabond (organically bonded) material.

Dilecto, a laminated phenolic material, meets the need for a non-metallic lightweight insulating material that is moisture resistant, good electrically, strong and adaptable to all fabricating operations. Some grades have exceptionally high mechanical strength — tensile, flexural, impact; others have high dielectric strength, high insulation resistance, high arc resistance and low loss factor.

Dilecto is a laminated material made from a base of either cellulosic paper; heavy or fine weave woven cotton fabric or mat; asbestos paper, woven asbestos fabric or mat; woven glass fabric or mat; and is coated with a synthetic resin.

The selection of the proper base material, the proper resin in the correct proportion is C-D-F's job, but the end user must realize how important it is that he fully understands what dividend results can be gained mechanically, and electrically, and from a cost standpoint, by getting the very best C-D-F material for the project. Here is a brief, yet complete listing of Dilecto sheet grades, each one with a combination of proven characteristics built into the material for the specific job.

SHEET GRADES (Rod and Tubing similar to sheet stock)

- X For mechanical applications when electrical properties are secondary.
- P For punching (Paper-based grades).
- XX For electrical applications requiring mechanical strength.
- XXX For high humidity applications with minimum cold flow.
- L For mechanical applications requiring fine machining.
- C For mechanical applications requiring toughness plus impact strength, for chemical and special applications.
- CE and LE For electrical uses requiring greater toughness than paper-based grades.
- GB For applications requiring heat resistance and high mechanical strength. For high heat applications.

SPECIALTIES made for a variety of structural, mechanical and electrical applications. There's one to fit your needs.

TEFLON

SUPPORTED AND UNSUPPORTED SHEETS AND TAPES



Due to the non-flammability and high heat resistance of Teflon,* it easily meets both Class B and Class H A.I.E.E. standards for maximum hot spot insulation temperatures. Teflon coated glass fabric laminates withstand 250° C. continuously and up to 300° C. intermittently without apparent degradation from oxygen.

A Teflon laminate has practically zero water absorption. The dissipation factor and dielectric constant of Teflon laminates are both extremely low over a wide frequency range. From 60 to 100 mc., the dissipation factor range is between .005 to .0005 and the dielectric constant ranges from 2.8 to 2.5 when measured in a field perpendicular to laminations.

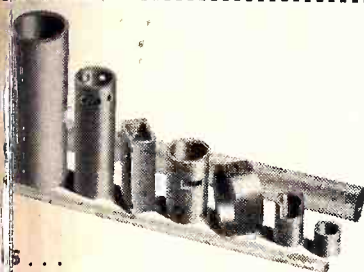
* du Pont's tetrafluoroethylene resin.

PRINTED CIRCUITS . . . C-D-F Copper-clad Teflon does not absorb water, is resistant to surface leakage under high humidity and withstands temperatures over 200° C. At 100 megacycle frequency, the average loss factor is .0033. Because electrolytic copper sheet is used, it is free from impurities and is available in wide widths.

COILS AND CABLES . . . High voltage wires and cables use multi-layer wrappings of both unsupported and supported C-D-F tapes of Teflon to increase transmission line efficiency and to give permanent, trouble-free protection to cables of all types, including coaxial cables.

SPIRAL TUBING

CIRCLE • SQUARE • FLUTED • THREADED



C-D-F spiral tubing is stiff, sturdy, crush resistant. It has good tensile strength along with good dimensional stability under varying atmospheric conditions. It is low in cost, a strong material made of spiral-wound kraft paper which is impregnated with phenolic resin. Can be sawed, drilled, tapped, punched. Standard lengths are 2 to 4'. There are 13 standard grades. Write or call C-D-F about special sizes or grades.

General electrical, radio and television applications; coil forms for solenoids, transformers, relays, circuit breakers, and television tuners and deflection coils. Also used for selenium rectifier tubes and for containers and protective wrappings requiring extra strength and rigidity.

Property (1/16" thickness)	A.S.T.M. Test Method	Unsupported	Supported
Dielectric Strength	D-149		
Parallel to laminations, KV	Short time	70	65
	Step by step	55	50
Perpendicular to laminations, VPM	.005" thick	1500	800
Short time	.060" thick	600	700
Dissipation Factor, 10 ⁶ cycles	D-150	.00055	.0007
Dielectric Constant, 10 ⁶ cycles	D-150	1.87	2.6
Loss Factor, 10 ⁶ cycles	D-150	.0010	.0013
Arc Resistance, seconds	D-495	over 250	over 160
Insulation Resistance, megohms	D-257	over 10 ⁶	over 10 ⁶
Surface Resistance, megohms per cm	D-257	over 10 ⁶	over 10 ⁶
Volume Resistivity, megohms per cm	D-257	over 10 ⁶	over 10 ⁶

CELORON

A fabric based laminated or molded thermosetting phenolic plastic. May be supplied in sheets of all laminated construction, or molded from macerated fabric or a combination of macerated and laminated construction in a mold to the desired shape. Parts, either sheet stock or molded, may be machined to close dimensional tolerances. Celoron is chemically inert, insoluble, infusible. Unaffected by rapid temperature changes (may be used at 110° to 120° C.), it combines impact strength, dielectric strength, moisture and heat resistance, and has dimensional stability.

VULCOID

A resin-impregnated vulcanized fibre in sheets, tubes, rods, and fabricated parts. Approved by the Underwriters' Laboratories as Class A Insulation because of its good dielectric characteristics. Economical, easy to machine and punch, and is considered an intermediate grade between Vulcanized Fibre and a laminated phenolic.

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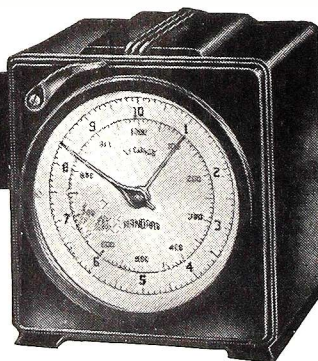
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LONG-LIFE PERFORMANCE AND
EXTREME ACCURACY. RUGGED, FOR
HEAVY-DUTY SERVICE: FLEXIBLE IN
APPLICATION.**

Model	Scale Divisions	Totalizes	Accuracy
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S-60	1/5 sec.	60 min.	±.1 sec.
SM-60	1/100 min.	60 min.	±.002 min.
S-10	1/10 sec.	1000 sec.	±.02 sec.
S-6	1/1000 min.	10 min.	±.0002 min.
S-1	1/100 sec.	60 sec.	±.01 sec.
MST	1/1000 sec.	.360 sec.	±.001 sec.
MST-500	1/1000 sec.	30 sec.	±.002 sec.

The clutch coil can be connected directly in the plate circuit of electronic tubes. For this use the coil has a resistance of 2000 ohms and requires 50 to 60 milliamperes. When ordering for this purpose, always specify 120V DC clutch coil. Write for Bulletin 153.

THE Standard Electric Time Co.
97 Logan Street **STANDARD** Springfield, Mass.
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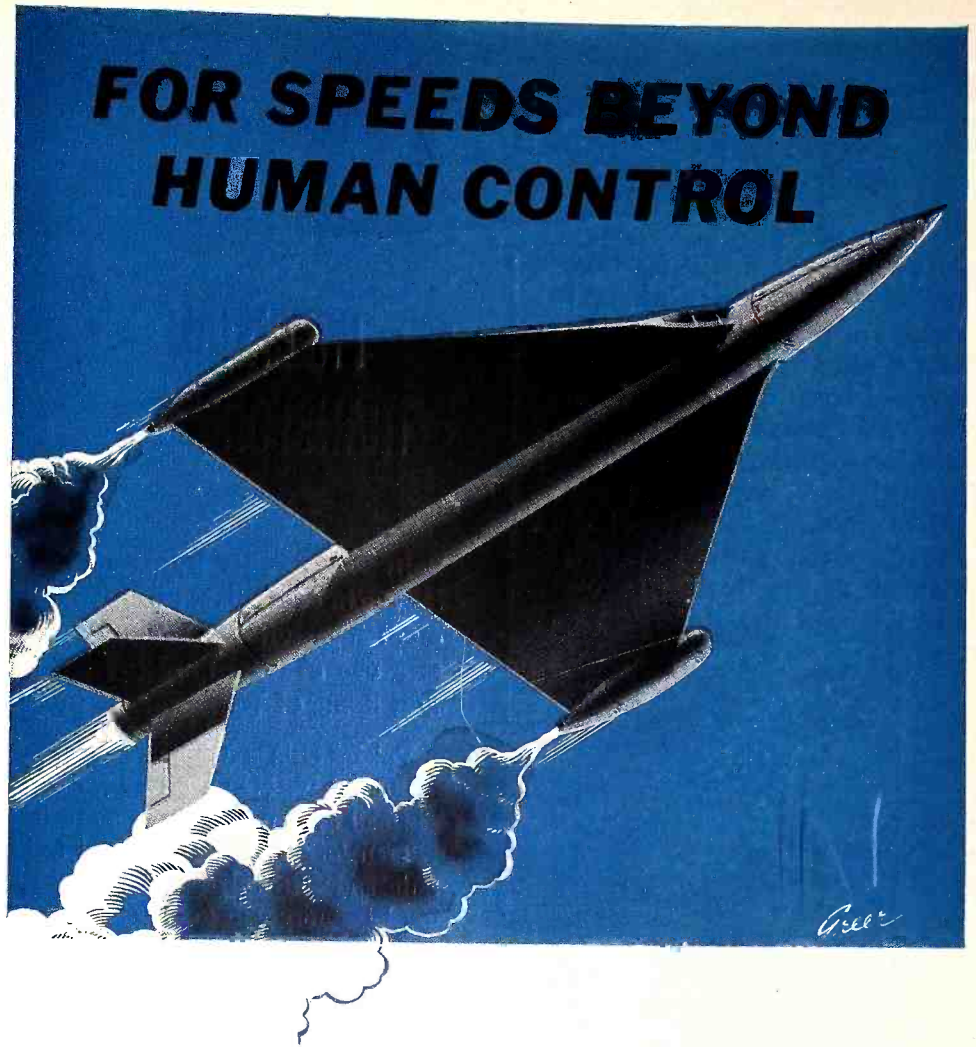
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Early recognition of this basic problem enabled Kearfott to direct its outstanding development and production facilities to practical solution. Kearfott control components are setting new standards for precision and speed of response. Gyros and synchros of uncanny accuracy; compact servo

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This engineering skill and the matching production facilities of Kearfott are available to you for the development and manufacture of components for your systems. Technical bulletins describing standard items will be sent on request. Your inquiries on both standard products and special purpose units are invited.

KEARFOTT COMPONENTS INCLUDE:

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CREATIVE ENGINEERING
PRODUCTION ACHIEVEMENT

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All your requirements for transformers can be met "right up to specs" at TRANSFORMERS INC. Our highly trained staff of engineers, specializing in transformers, backed by ample production facilities, the most rigid testing and inspection procedures enables us to meet the most exacting requirements. Consult us first for the following types of transformers . . .

PRECISION
INSTRUMENT
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OUTPUT
PULSE
HYBRID
MATCHING
POWER
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TOROIDAL

CLASS A
HIGH
TEMPERATURE
CLASS "H"
MINIATURE
SUB-MINIATURE
MIL-T-27
COMMERCIAL
GRADE

PRECISION TRANSFORMERS

Voltage reference transformers for use in computers and instrument transformers for laboratory use are standard production items of Transformers Inc.

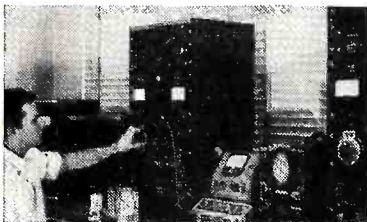
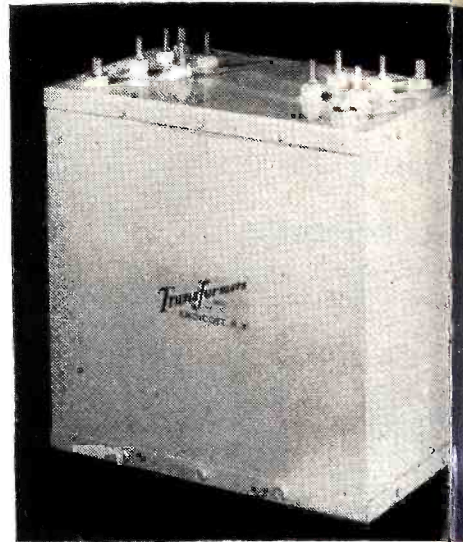
Voltage ratio accuracy of $\pm 0.5\%$ can readily be obtained while accuracies as low as $\pm .01\%$ have been achieved for special applications. The phase angle can be as small as .1 milliradian (approximately 20 seconds).

Transformers Inc. has special facilities for the accurate measurements of voltage ratio and extremely small phase angles. Special techniques have been developed by our laboratory staff to manufacture precision transformers with predictable accuracy and permanency. Any assistance required in the application of precision transformers to specific problems will be furnished free of charge by our engineering staff.

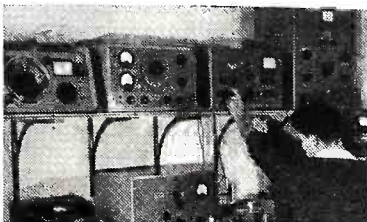
Samples of voltage reference transformers have been submitted to the *National Bureau of Standards* for calibration and have been found to have a voltage ratio accuracy of better than $\pm .05\%$.

AUDIO TRANSFORMERS

Transformers Inc. has one of the most complete laboratories for the design of audio transformers. Our plant facilities permit us to manufacture large quantities at better than competitive prices. Although Transformers Inc. does not carry any stock items a special sample department is equipped to manufacture small quantities of audio transformers that are not commonly available. We also solicit inquiries on plate power and filament transformers for either large production quantities or samples.



INDUCTANCE MEASUREMENT—Any operating condition can be simulated in the range of 0-1000V A.C. and 0-5 Amps. D.C.



DEVELOPMENT OF AUDIO TRANSFORMERS—All characteristics of audio transformers in the range of .01 cycle to 10 M.C. can be measured and evaluated.



POWER LOSS MEASUREMENT—Losses as low as 15 micro watts in the range of 20 c to 200 K.C. can be measured and analyzed and possible improvements effected.



PULSE TRANSFORMER DESIGN—Try methods commonly used in the design of pulse transformers have been supplanted by use of special equipment.

MINIATURE TRANSFORMERS

Air-borne electronic equipment has created a need for small transformers with particular emphasis on light weight. Small sizes are obtained by the use of special core material and light weight requirements are met by special encapsulating methods. TRANSFORMERS, INC. is a recognized source for miniature transformers for military or industrial use. We carry a large stock of special alloy laminations in a great variety of sizes.

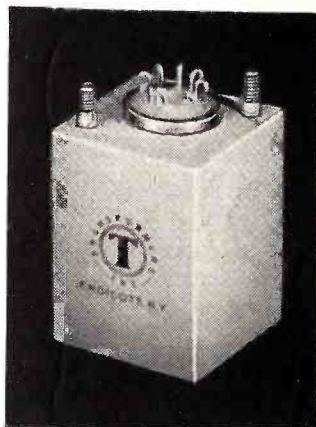
SUB-MINIATURE TRANSFORMERS

Even greater miniaturization can be effected in special cases by either reducing the efficiency of the transformer or by making the operating requirements less stringent.

All inquiries on miniature and sub-miniature transformers will receive prompt attention. In view of our large inventory on special alloy laminations samples of miniature and subminiature transformers can be made promptly.

PULSE TRANSFORMERS

Transformers Inc. has the proper engineering, production and testing facilities for the manufacturing of all types of pulse transformers. We are currently manufacturing a great variety of pulse transformers of the miniature size used in blocking oscillators. These transformers are used in conjunction with standard vacuum tubes to produce pulses with a width as small as .1 microsecond, and with repetition rates up to 5000 p.p.s. We are also equipped to manufacture power pulse transformers as used in radar equipment. We are at present designing and developing a power pulse transformer with a peak power output of 4 megawatts and a peak voltage of 61 kilovolts to be used in conjunction with a magnatron.



HIGH TEMPERATURE TRANSFORMERS - CLASS "H"

Class "H" transformers can be divided into two distinct groups.

GROUP 1

The first group are those that operate in extremely high ambient temperatures. They are of normal weight and size.

GROUP 2

The second group are those transformers that of necessity have been made so small in size by reducing their efficiency so that the attendant losses cause high temperature during operation.

In addition to these two groups there is a third in which the ambient is high and miniaturization has been effected. Transformers Inc. is in a position to make samples as well as large quantities of these types of transformers.



Transformers Inc. meets all requirements for

CLASS A • HIGH TEMPERATURE-CLASS "H" • MINIATURE
SUB-MINIATURE • MIL-T-27 • COMMERCIAL GRADES



TRANSFORMERS INC.

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ENDICOTT, NEW YORK

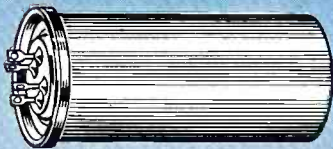
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STATIC ELECTROMAGNETIC DEVICES

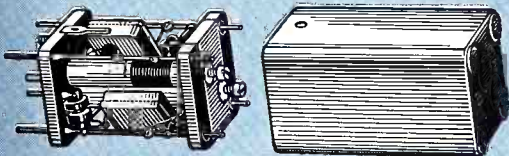
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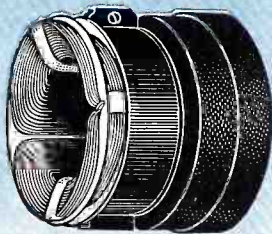
DELAY LINES



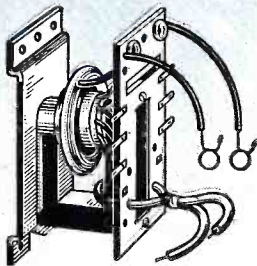
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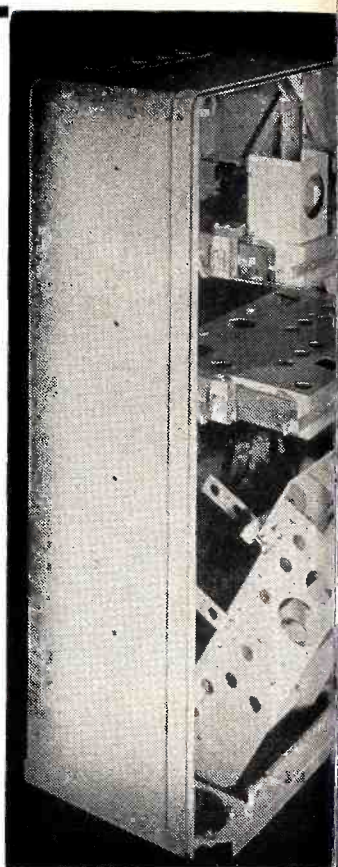
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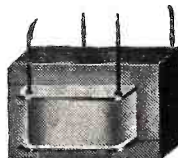


The Key to SUBMINIATURE TRANSFORMER PROBLEMS

DIMENSIONS:.....7/16" x 3/4" x 5/8"
WEIGHT:.....Less than 1/3 of an ounce
TYPES:.....input, interstage, output

These transformers fit into the smallest Mil-T-27 Case

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To Your Subminiature Problems



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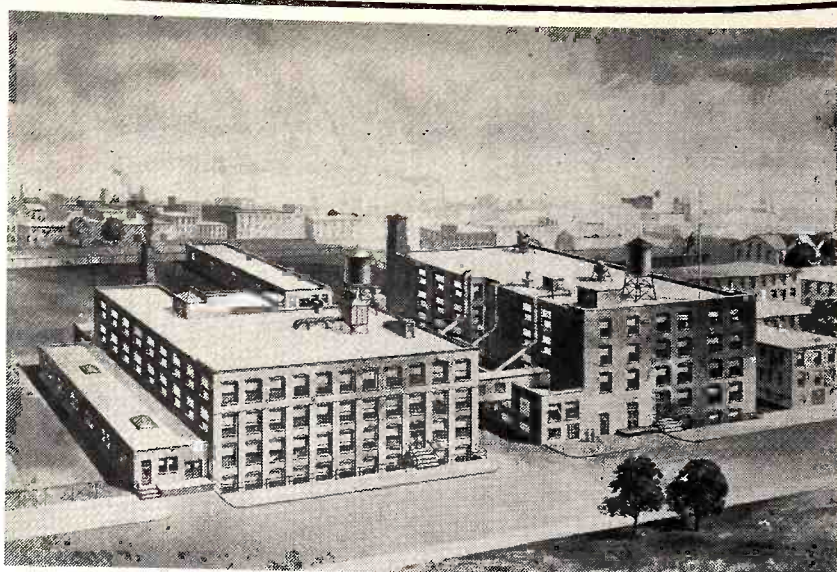
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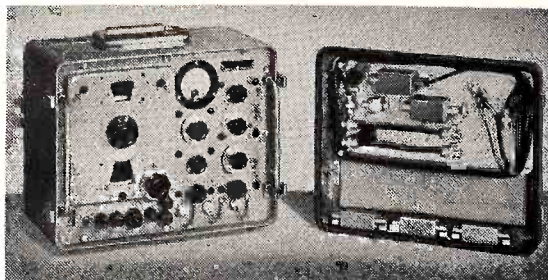
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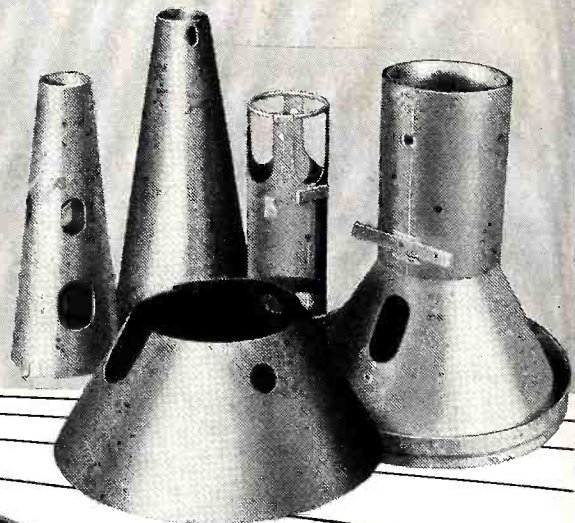
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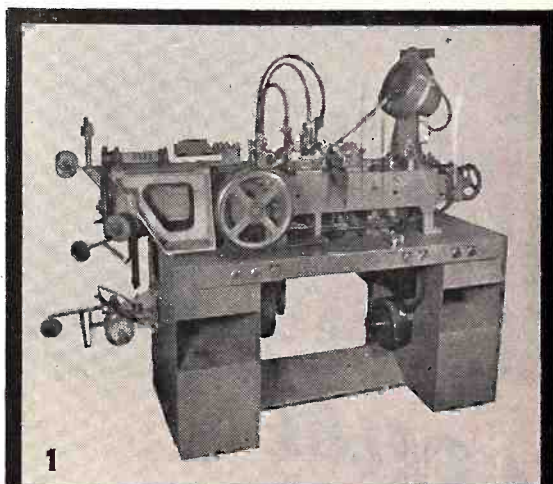
Sub-miniature to Cathode Ray



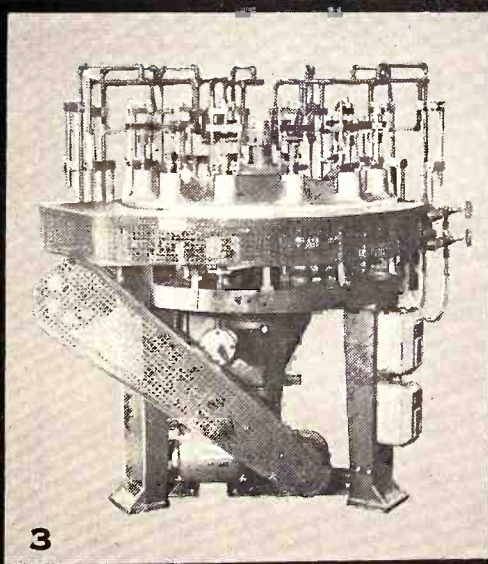
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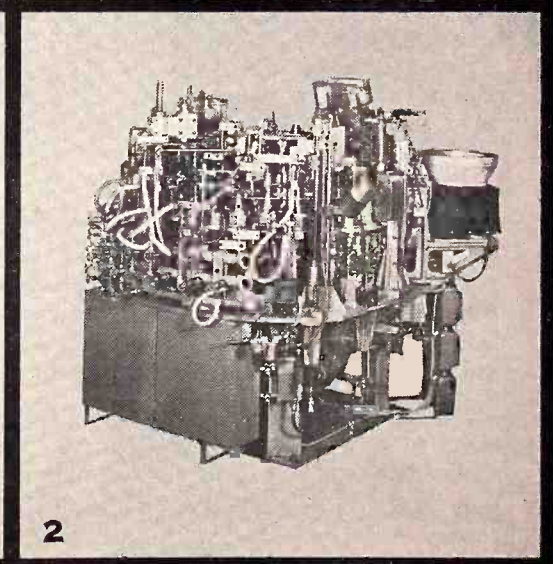
(1) MODEL 2148, Automatic Lead Wire Welding Machine. (2) MODEL 2179, Automatic Button Stem Machine; (3) MODEL 1384, Sub-miniature Button Stem Machine; (4) MODEL 2185, CR Tube Combination Neck Cutting and Neck Splicing Machine.



1



3



2

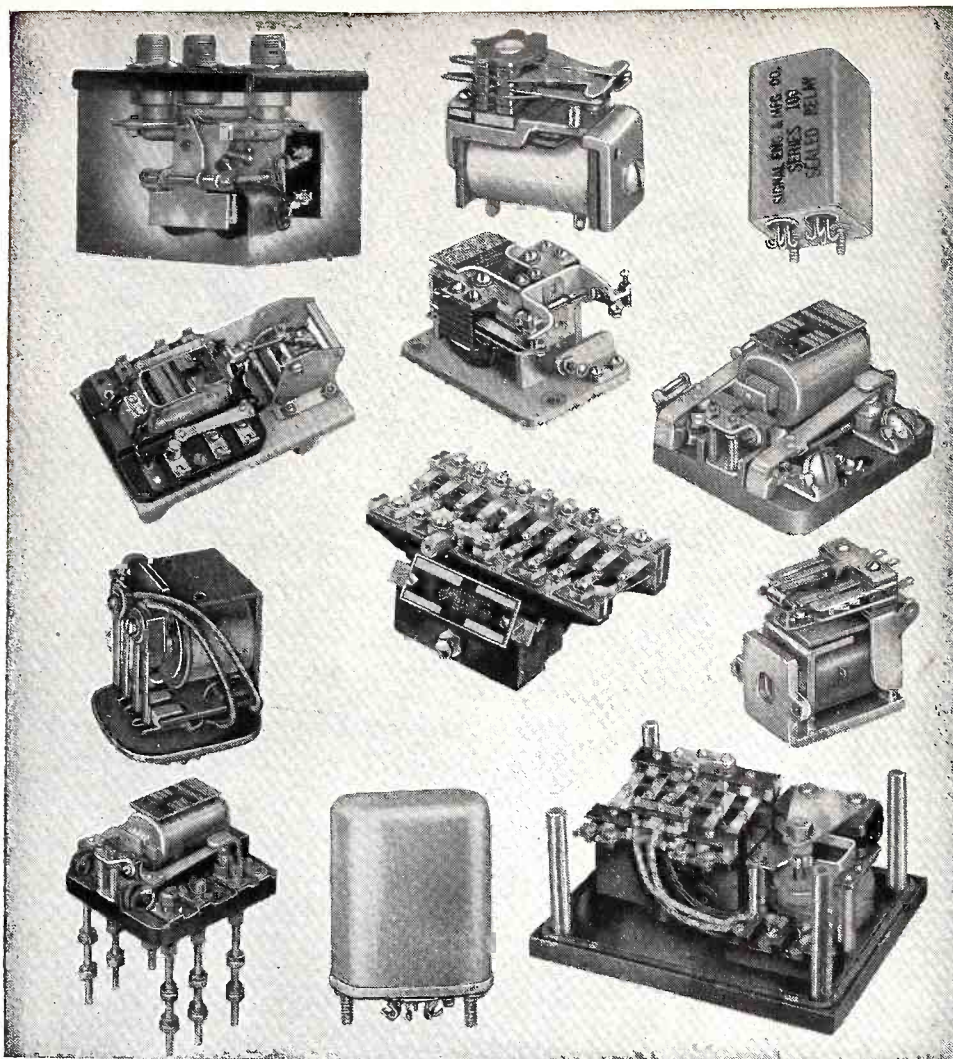


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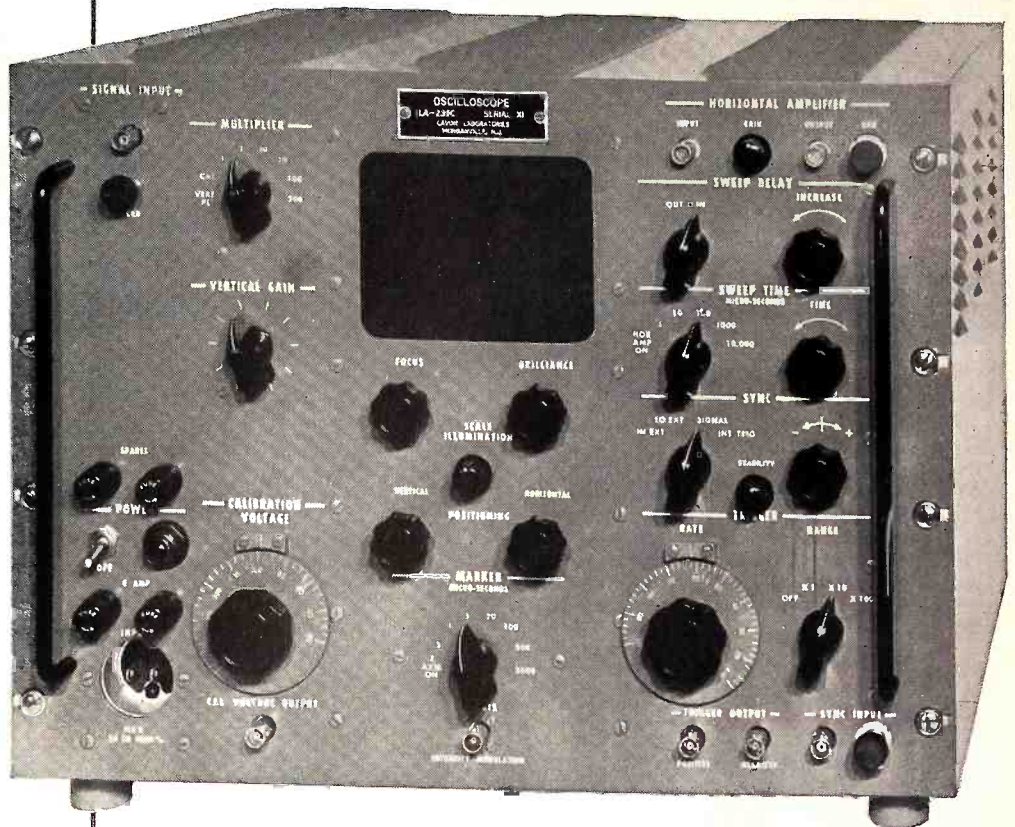
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On 3 to 20 Megacycles

The LA-239 C Oscilloscope

DATA

- 1. Wider Bandwidth:** Complex waves from 5 Cycles to 15 Megacycles. Sine waves from 3 Cycles to 20 Megacycles.
- 2. Extended Sweep Frequencies:** Linear from 10 Cycles to 20 Megacycles internally synchronized. Triggered sweep, from single random impulses to regular pulse-intervals up to as high as 20 Megacycles.
- 3. Square Wave Response:** Rise time 0.042 Microseconds; only 5% droop on flat-topped pulses as long as 30,000 Microseconds duration.
- 4. Greater Stability:** Electronically regulated power supplies throughout to maintain accuracy and constant operation under varying line conditions or line surges. You can display surges on the line from which Model LA-239C is being powered without distortion of the trace!
- 5. Higher Signal Sensitivity:** Maximum sensitivity without Probe: 10.4 millivolts. With Probe: 100 millivolts. (Maximum signals, 125 V. Peak and 450 V. Peak respectively.)
- 6. Timing Markers:** Interval Markers of .2; 1; 5; 20; 100; 500; or 2,000 Microseconds may be superimposed on the trace for the accurate measurement of the time base.
- 7. Voltage Calibration:** Signal amplitude compared against a 1,000 cycle square wave (generated internally) the amplitude of which is controlled by a step-and-slide attenuator calibrated in peak volts. (A jack is provided to deliver 40V Peak for use in calibrating other instruments.)
- 8. Sweep Delay:** Any portion of the sweep longer than a 10 Microsecond section may be expanded by 10:1 for detailed study of that portion of the signal.
- 9. Power Source:** 110 to 130 V AC; from 50 to 1,000 cycles. 295 Watts. (Fused at 4 amperes.)
- 10. Dimensions:** In Bench Cabinet: 19½ in. Wide; 15¼ in. High; 16¾ in. Deep. In Rack Mounting (With cabinet removed to fit standard relay rack): 19½ in. Wide; 14 in. High.



THE LAVOIE MODEL LA-239C has been designed to surpass the high performance of the TS-239A/UP, which has been the standard test oscilloscope for the Armed Services since its introduction. Model LA-239C is the result of a long period of research and development which has included the study of new tubes, new circuits, and new techniques. Rugged design has been combined with functional simplicity to produce an instrument as attractive as it is efficient.

To create a circuit that will produce a certain complex wave form, or study transients and pulse phenomena, no better precision instrument is available today.

Lavoie Laboratories take pride in offering this precision oscilloscope as the combination of engineering perfection and manufacturing skill.



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DESIGNERS AND MANUFACTURERS OF ELECTRONIC EQUIPMENT

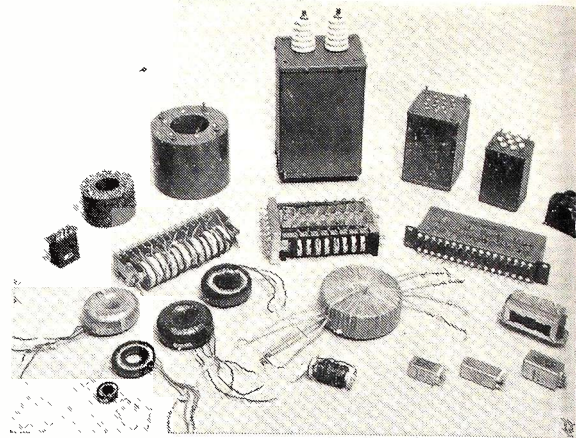


CUSTOM BUILT TRANSFORMERS

Raytheon can furnish custom engineered transformers to fit any special need. Typical units include: single or polyphase power transformers, blocking oscillators, servo transformers, chokes, audio components, filters, saturable magnetic components, etc. Cased or open types to meet the most exacting MIL specifications, as well as Underwriters' Laboratories and R.T.M.A. requirements.

TOROID-L UNITS

TOROID-L coils wound on powdered permalloy cores, high permeability solid materials or stamped "O" cores. Facilities for all types of winding including litzendraht winding, winding heavy wire on wedding ring coils and square coils wound from strip materials. Other Toroid-L Units include: transformers, filter networks for audio or ultrasonic work, lumped parameter delay lines and magnetic amplifier coils. Write for specific information.

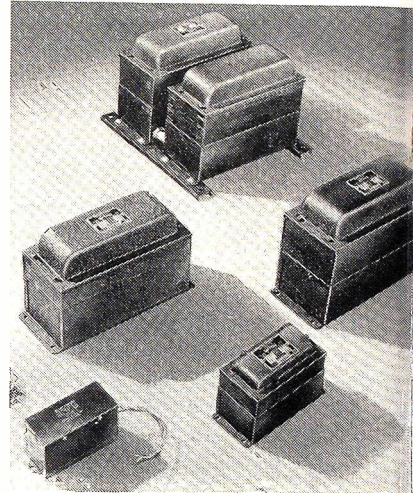


VOLTAGE STABILIZERS

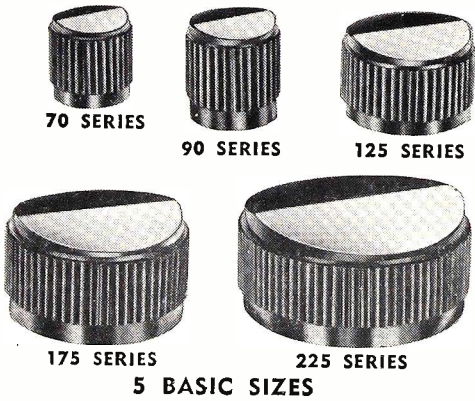
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1. Deliver accurate AC voltage within $\pm 1/2\%$
2. Stabilize output with more precision
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5. Better no-load to full-load regulation
6. Accept wider input voltage range
7. Less voltage change as units heat up
8. Less change in output as frequencies fluctuate
9. Smaller, lighter, more compact; no moving parts
10. Cost less to operate

Standard catalog types rated from 15 to 2000 watts as illustrated, are available through 125 authorized distributors. All models operate on input of 95 to 130 volts, 60 cycle, single phase current; compensate within 1/20 second; maintain voltage within $\pm 1/2\%$ of rated output. Special custom-built units in ratings from 5 to 10,000 watts are also available to meet special needs. Write for complete information.



STANDARD CONTROL KNOBS



Raytheon control knobs offer CUSTOM style and quality at STANDARD cost. Made of tough, durable "Tenite II" (cellulose acetate butyrate), injection molded with anodized aluminum inserts and dual setscrews. All types and sizes to fit 1/4-inch diameter shafts. Miniature (70 series) round, dial and pointer knobs also available for 3/8-inch shafts.



MATTE OR MIRROR FINISH

Black knobs available with high gloss "mirror" finish for commercial applications or non-reflecting "matte" finish for government equipment. Manufacturers interested in colored knobs are invited to submit their requirements for quotation.

(All Knobs Shown 1/2 Size)



WELDPOWER*

STORED ENERGY WELDING UNITS

Raytheon Condenser Weldpower Control Units and Weldpower Welding Heads are designed especially for precision welding light gauge non-ferrous and ferrous metals. They are widely used in the Electronics Industry for assembling tubes and other components; attaching pigtailed to condensers, resistors, batteries, etc.; welding contacts involving similar or dissimilar metals and countless other small part assembly jobs.

Weldpower welding is precisely repetitive, completely dependable. It offers the important advantages over soldering, conventional AC welding or other assembly methods of time saved, fewer rejects, increased production and lower cost. Write for complete information.

*Reg. U. S. Pat. Off.

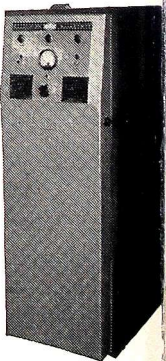
Raytheon stored energy Weldpower Control units are available in three models with appropriate Weldpower heads.



Model 60-A
Capacity:
63 watt-seconds



Model 225-A
Capacity:
225 watt-seconds



Model 1100
Capacity:
1080 watt-second



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MAGNETRON OSCILLATORS

For Pulse and CW Operation

TUBE TYPE	FREQ. MC	POWER OUT (MW)		RESONATOR POTENTIAL D. C. Volts	FOCUS OR CONTROL GRID POTENTIAL D. C. Volts	MAX. THERMAL DRIFT MC/C°	FILAMENT CURRENT at 6.3 V Amps	†
		Ave.	Min.					
07B	1200-3750	140	80	300	300	±.15	0.650	1-A
RK28	1200-3750	140	80	300	300	±.15	0.650	1-A
B133	1200-3750	140	95	300	300	±.15	0.650	1-A
650	1245-1390	100	40	225	300	±.05	0.455	2-A
981/5650	1245-1460	100	40	225	.....	±.05	0.455	2-A
BL6	1600-4000	121	..	300	0	.....	0.675	1-A
	2000-4500	45	25	300	0	.....	0.675	1-A
	3600-5500	72	25	300	0	.....	0.675	1-A
	.....	.....	.....	300	0	.....	0.675	1-A
721	3500-5000	225	180	1000	4 to 18	±.040	0.580	1-A
	4290-8340	125	100	1000	4 to 18	±.025	0.580	1-A
	6870-11000	40	20	1250	4 to 18	±.040	0.580	1-A
236	3800-7600	125	90	1000	4 to 18	±.025	0.580	1-A
26-C	2700-2960	100	85	300	.....	-.1 to +.05	0.440	2-A
943	2950-3275	175	150	300	300	±.15	0.650	2-A
	.....	50	25	250	250	.....	.....	.....
K29	3400-3960	106	85	300	.....	-.1 to +.05	0.440	2-A
K56	3840-4460	100	80	300	.....	-.1 to +.05	0.440	2-A
K22	4240-4910	115	75	300	.....	-.1 to +.05	0.440	2-A
	4300-4450	.....	5	1250	.....	.....	0.575	1-A
	6900-7200	.....	5	1250	.....	.....	0.575	1-A
K48	10,550-10,850	.....	20	.....	.....	.....	0.575	1-A
	.....	.....	20	1250	.....	.....	.....	.....
115	5100-5900	100	70	300	.....	-.10 to +.05	0.440	2-B
K-412	4500-6000	100	70	300	.....	-.10 to +.05	0.440	2-B
K-404	5925-6450	120	100	300	.....	-.10 to +.10	0.440	2-B
976	6200-7425	110	85	300	.....	-.10 to +.10	0.440	2-B
K26	6250-7060	100	80	300	.....	0 to -.20	0.440	2-B
K25	8500-9660	32	20	300	.....	0 to -.20	0.440	2-B
	.....	22	15	.....	.....	.....	.....	.....
K45	8500-9660	32	20	300	.....	.....	0.762	3-B
16	8500-9660	32	20	300	.....	.....	0.50	3-B
K-306	18,000-22,000	40	10	1800	-20 to -100	-1.0	0.650	2-B
53	18,000-22,000	40	10	1800	-20 to -100	-1.0	0.650	2-B
33	22,000-25,000	40	10	1800	-20 to -100	-1.0	0.650	2-B
54	22,000-25,000	40	10	1800	-20 to -100	-1.0	0.650	2-B
K-289	27,270-30,000	20	10	2250	-20 to -250	To be Specified	0.650	2-B
K-290	29,700-33,520	20	10	2250	-20 to -250	To be Specified	0.650	2-B
K-291	33,520-36,250	18	5	2250	-20 to -250	To be Specified	0.650	2-B
K-292	35,100-39,700	10	5	2500	-20 to -200	To be Specified	0.650	2-B
K-293	37,100-42,600	5	.....	2500	-20 to -200	To be Specified	0.650	2-B
K-294	41,700-50,000	5	.....	3000	-20 to -200	To be Specified	0.650	2-B
K-295	.....	To be Specified	.....	3500	-20 to -200	To be Specified	0.650	2-B

TYPE NO.	HEATER		BAND OR RANGE MC	MAX. RATINGS			CLASS *	Min Pk Kw
	Volts	Amps		Anode Kv	Anode Amps	Duty Cycle		
RK5J26	23.5	2.2	1220-1350	31.0	60.0	.002	1	400.0
RK4J30	23.5	2.2	1220-1232	30.0	60.0	.002	2	600.0
RK4J29	23.5	2.2	1232-1244	30.0	60.0	.002	2	600.0
RK4J28	23.5	2.2	1244-1256	30.0	60.0	.002	2	600.0
RK4J27	23.5	2.2	1256-1268	30.0	60.0	.002	2	600.0
RK4J26	23.5	2.2	1268-1280	30.0	60.0	.002	2	600.0
RK4J25	20.5	2.2	1280-1294	30.0	60.0	.002	2	600.0
RK4J24	20.5	2.2	1294-1308	30.0	60.0	.002	2	600.0
RK4J23	20.5	2.2	1308-1322	30.0	60.0	.002	2	600.0
RK4J22	20.5	2.2	1322-1336	30.0	60.0	.002	2	600.0
RK4J21	20.5	2.2	1336-1350	30.0	60.0	.002	2	600.0
QK174B	8.0	5.0	1990-2110	2.2	0.3	CW	3	0.07
QK217	8.5	32.0	2425-2475	5.5	0.8	CW	4	2.0
QK217P	8.5	32.0	2425-2475	5.25	0.75	CW	4	1.5
QK312	8.5	32.0	2425-2475	5.75	0.35	CW	4	0.7
RK5609	6.3	3.8	2425-2575	1.6	0.15	CW	4	0.085
RK5586	16.0	3.1	2700-2900	32.0	70.0	.001	1	900.0
RK4J53	16.0	3.1	2793-2813	30.0	70.0	.001	2	500.0
QK254	13.0	42.0	2860-2900	46.0	110.0	.0007	2	2000.0
RK2J69	6.3	1.5	2695-2755	20.0	25.0	.001	1	150.0
RK2J68	6.3	1.5	2745-2805	20.0	25.0	.001	1	150.0
RK2J67	6.3	1.5	2795-2855	20.0	25.0	.001	1	150.0
RK2J66	6.3	1.5	2845-2905	20.0	25.0	.001	1	150.0
RK2J34	6.3	1.5	2700-2740	22.0	30.0	.002	2	285.0
RK2J33	6.3	1.5	2740-2780	22.0	30.0	.002	2	285.0
RK2J32	6.3	1.5	2780-2820	22.0	30.0	.002	2	285.0
RK2J31	6.3	1.5	2820-2860	22.0	30.0	.002	2	285.0
RK2J30	6.3	1.5	2860-2900	22.0	30.0	.002	2	285.0
RK4J35	16.0	3.1	2700-2740	30.0	70.0	.001	2	900.0
RK4J34	16.0	3.1	2740-2780	30.0	70.0	.001	2	900.0
RK4J33	16.0	3.1	2780-2820	30.0	70.0	.001	2	900.0
RK4J32	16.0	3.1	2820-2860	30.0	70.0	.001	2	900.0
RK4J31	16.0	3.1	2860-2900	30.0	70.0	.001	2	900.0
RK5657	16.0	3.1	2900-3100	32.5	70.0	.001	1	800.0
RK2J62A	6.3	1.5	2914-3010	15.0	15.0	.002	1	35.0
QK44	6.3	3.5	2960-3060	1.6	0.15	CW	4	0.10
RK2J61A	6.3	1.5	3000-3100	15.0	15.0	.002	1	35.0
RK2J29	6.3	1.5	2914-2939	22.0	30.0	.002	2	275.0
RK2J28	6.3	1.5	2939-2965	22.0	30.0	.002	2	275.0
RK2J27	6.3	1.5	2965-2992	22.0	30.0	.002	2	275.0
RK2J26	6.3	1.5	2992-3019	22.0	30.0	.002	2	275.0
RK2J25	6.3	1.5	2019-3047	22.0	30.0	.002	2	275.0
RK2J24	6.3	1.5	3027-3071	22.0	30.0	.002	2	275.0
RK2J23	6.3	1.5	3071-3100	22.0	30.0	.002	2	275.0
RK4J44	16.0	3.1	2965-2992	30.0	70.0	.001	2	900.0
RK4J43	16.0	3.1	2992-3019	30.0	70.0	.001	2	900.0
RK4J61	6.3	3.5	2450-2720	1.5	0.15	CW	3	0.05
RK4J62	6.3	3.5	2700-3010	1.5	0.15	CW	3	0.05
RK4J63	6.3	3.5	2990-3330	1.5	0.15	CW	3	0.05
RK4J64	6.3	3.5	3110-3670	1.5	0.15	CW	3	0.05
RK2J70	6.3	1.25	3030-3110	7.5	15.0	.002	2	20.0
RK2J71	6.3	1.25	3190-3201	5.5	8.0	.002	2	6.0
RK2J38	6.3	1.25	3249-3263	5.0	8.0	.012	2	2.5
RK2J52	6.3	1.5	3258-3406	15.0	15.0	.002	1	70.0
RK2J22	6.3	1.5	3267-3333	22.0	30.0	.002	2	240.0
RK2J39	6.3	1.25	3267-3333	5.5	8.0	.002	2	6.0
RK4J41	16.0	3.1	3400-3450	30.0	70.0	.001	2	750.0
RK4J40	16.0	3.1	3450-3500	30.0	70.0	.001	2	750.0
RK4J39	16.0	3.1	3500-3550	30.0	70.0	.001	2	750.0
RK4J38	16.0	3.1	3550-3600	30.0	70.0	.001	2	750.0
RK4J37	16.0	3.1	3600-3650	30.0	70.0	.001	2	750.0
RK4J36	16.0	3.1	3650-3700	30.0	70.0	.001	2	750.0
QK117A	6.3	3.5	3700-4000	1.3	0.150	CW	3	0.04
RK4J59	12.6	3.75	6375-6275	25.0	35.0	.001	2	180.0
RK4J58	12.6	3.75	6475-6375	25.0	35.0	.001	2	180.0
RK4J57	12.6	3.75	6575-6475	25.0	35.0	.001	2	180.0
RK4J56	12.6	3.75	6675-6575	25.0	35.0	.001	2	180.0
RK4J55	12.6	3.75	6775-6675	25.0	35.0	.001	2	180.0
RK4J54	12.6	3.75	6875-6775	25.0	35.0	.001	2	180.0
RK2J51	6.3	1.0	8500-9600	16.0	16.0	.0012	1	45.0
RK2J50	6.3	1.0	8750-8900	16.0	16.0	.0012	2	40.0
RK2J49	6.3	1.0	9000-9160	16.0	16.0	.0012	2	40.0
RK2J36	6.3	1.5	9003-9168	13.5	12.0	.002	2	14.0
RK2J56	6.3	1.0	9215-9275	16.0	16.0	.001	2	50.0
RK2J55	6.3	1.0	9345-9405	16.0	16.0	.001	2	50.0
RK6002	4.0	40.0	9230-9404	30.0	40.0	.002	2	250.0
QK210	6.3	6.2	9240±10	2.0	0.1	CW	5	0.035
RK2J48	6.3	1.0	9310-9320	16.0	16.0	.002	2	25.0
RK5982	6.3	8.25	9320-9					

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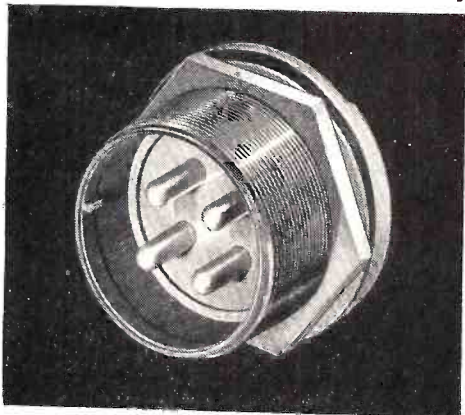
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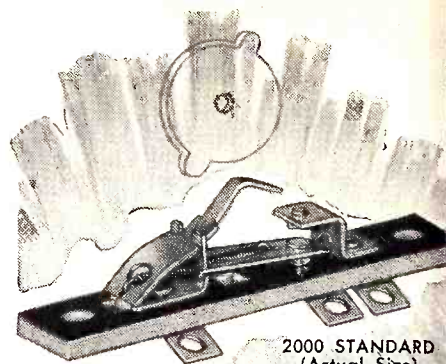
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The new Radio Broadcasting facilities at Accion Cultural Popular, in Sutatenza, Colombia, used for combatting illiteracy in Latin America. This station, utilizing a Type XT-2-A, 25/40 KW Short Wave broadcast and communication transmitter, is the highest power installation in northern South America. Maurice I. Parisier and Co. furnished the transmitter plant and was responsible for the over-all station erection supervision.



Dedication of the Maurice Parisier & Co. Type XT-transmitter on April 1953 by Cardinal Ciriaco Luque of Colombia.

TYPE XT-2-A 25/40 KW SHORT WAVE BROADCAST AND COMMUNICATION TRANSMITTER

All assembling done with parts, manufacturing drawings and specifications supplied by the General Electric Co.

- 40 KW A-1 Transmission (Telegraph and Frequency Shift Keying)
- 25 KW A-3 Transmission (Broadcast Quality)
- Carrier Frequency: 3.5 to 22 Mcs.

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TWO NEW

IN-RES-CO RESISTOR TYPES

TYPE PM RESISTORS

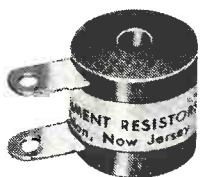
...for positive hermetic sealing, immunity to high temperature, moisture and salt spray

DESIGNED TO EXCEED MIL-R-93A SPECIFICATIONS

Type PM resistors were specially developed by IN-RES-CO to meet the demand for hermetically-sealed units featuring extremely lightweight yet capable of withstanding severe exposure to moisture and salt spray. They are imbedded in a specially developed

high temperature compound having the same T.C. of expansion as the wire and coil form, thus eliminating stresses inherent in other constructions which cause eventual failure. The compound used is an exclusive development of IN-RES-CO.

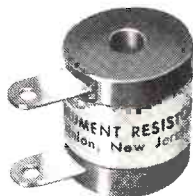
TYPE PM-1 .25 Watt, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	250,000 OHMS
KARMA*	.00135"	150,000 OHMS
NICHROME*	.001"	200,000 OHMS
NICHROME*	.00135"	125,000 OHMS
MANGANIN	.0015"	40,000 OHMS

BODY 9/16" dia., 1/2" long
TERMINALS: Hot-tinned brass lugs

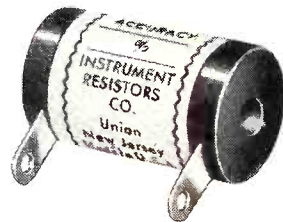
TYPE PM-2 .5 Watt, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	800,000 OHMS
KARMA*	.00135"	180,000 OHMS
NICHROME*	.001"	750,000 OHMS
NICHROME*	.00135"	150,000 OHMS
MANGANIN	.0015"	50,000 OHMS

BODY 5/8" dia., 5/8" long
TERMINALS: Hot-tinned brass lugs

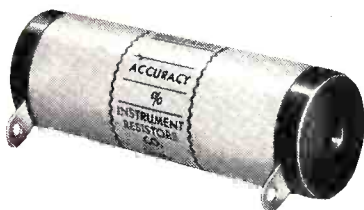
TYPE PM-4 1 Watt, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	1.5 MEGOHMS
KARMA*	.00135"	500,000 OHMS
NICHROME*	.001"	1.25 MEGOHMS
NICHROME*	.00135"	400,000 OHMS
MANGANIN	.0015"	140,000 OHMS

BODY 5/8" dia., 1-1/16" long
TERMINALS: Hot-tinned brass lugs

TYPE PM-10 2 Watts, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	6 MEGOHMS
KARMA*	.00135"	2 MEGOHMS
NICHROME*	.001"	5 MEGOHMS
NICHROME*	.00135"	1.5 MEGOHMS
MANGANIN	.0015"	500,000 OHMS

BODY 3/4" dia., 2-3/16" long
TERMINALS: Hot-tinned brass lugs

TYPE PM-15 .15 Watt, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	200,000 OHMS
NICHROME*	.001"	150,000 OHMS
MANGANIN	.00135"	6,000 OHMS

BODY 7/16" dia., 7/16" long
TERMINALS: Axial wire leads, 1-1/4" lg., No. 22 B & S tinned copper
MOUNTING: By leads—no hole

TYPE PM-30 .3 Watt, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	400,000 OHMS
NICHROME*	.001"	300,000 OHMS
MANGANIN	.00135"	12,000 OHMS

BODY 7/16" dia., 7/8" long
TERMINALS: Axial wire leads, 1-1/4" lg., No. 22 B & S tinned copper
MOUNTING: By leads — no hole

NOTE: 1: Unless otherwise noted all units shown have clearance hole through center for No. 6 screw.

CONSULT THE IN-RES-CO CATALOG—Your copy is available free, on request—contains complete specifications and illustrations of all types. It's new, up-to-date... is a valuable addition to your technical file. Call, wire or write for your copy today.



INSTRUMENT RESISTORS COMPANY

FOR TOUGH

MILITARY and COMMERCIAL

APPLICATIONS

TYPES PT & PL RESISTORS

.. for compact size and lightweight when hermetic sealing is not required

DESIGNED TO MEET MIL SPECIFICATIONS

Types PT and PL resistors offer the same space and weight saving advantages as the PM series. Although these units are not hermetically-sealed, they feature the same protective fungicidal coating and are the perfect answer where minimum size and weight, high

accuracy and rugged durability are essential. As noted in the specifications, the PT types have lug terminals and the PL types feature wire leads. Both types are otherwise similar in most respects, including maximum resistance values and choice of resistance alloys.

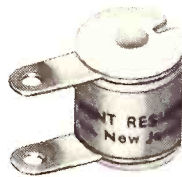
TYPE PT-1 .25 Watt, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	250,000 OHMS
KARMA*	.00135"	150,000 OHMS
NICHROME*	.001"	200,000 OHMS
NICHROME*	.00135"	125,000 OHMS
MANGANIN	.0015"	40,000 OHMS

BODY 1/2" dia., 7/16" long
TERMINALS: Hot-tinned brass lugs
TYPE PL-1 — Same as PT-1 except radial wire leads, 1 1/2" lg., No. 20 B & S tinned copper

TYPE PT-2 .5 Watt, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	800,000 OHMS
KARMA*	.00135"	180,000 OHMS
NICHROME*	.001"	750,000 OHMS
NICHROME*	.00135"	150,000 OHMS
MANGANIN	.0015"	50,000 OHMS

BODY 1/2" dia., 9/16" long
TERMINALS: Hot-tinned brass lugs
TYPE PL-2 — Same as PT-2 except radial wire leads, 1 1/2" lg., No. 20 B & S tinned copper

TYPE PT-4 1 Watt, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	1.5 MEGOHMS
KARMA*	.00135"	500,000 OHMS
NICHROME*	.001"	1.25 MEGOHMS
NICHROME*	.00135"	400,000 OHMS
MANGANIN	.0015"	140,000 OHMS

BODY 1/2" dia., 1" long
TERMINALS: Hot-tinned brass lugs
TYPE PL-4 — Same as PT-4 except radial wire leads, 1 1/2" lg., No. 20 B & S tinned copper

TYPE PT-10 2 Watts, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	6 MEGOHMS
KARMA*	.00135"	2 MEGOHMS
NICHROME*	.001"	5 MEGOHMS
NICHROME*	.00135"	1.5 MEGOHMS
MANGANIN	.0015"	500,000 OHMS

BODY 5/8" dia., 2-1/8" long
TERMINALS: Hot-tinned brass lugs
TYPE PL-10—Same as PT-10 except radial wire leads, 1 1/2" lg., No. 20 B & S tinned copper

TYPE P-81 .5 Watt, Non-Inductive



WIRE	SIZE	MAX. RES.
KARMA*	.001"	400,000 OHMS
KARMA*	.00135"	150,000 OHMS
NICHROME*	.001"	350,000 OHMS
NICHROME*	.00135"	140,000 OHMS
MANGANIN	.0015"	50,000 OHMS

BODY 3/8" dia., 3/4" long
TERMINALS: Radial wire leads, 1-1/2" lg., No. 22 B & S tinned copper
MOUNTING: Clearance hole for No. 4 screw through center

TYPE P-81-S .5 Watt, Non-Inductive



Available with same windings and maximum resistances as P-81 type but supplied with Bakelite shell for protection against mechanical injury and shorts in confined space.

BODY 7/16" dia., 3/4" long
TERMINALS: Axial wire leads, 1-1/2" lg., No. 22 B & S tinned copper
MOUNTING: Clearance hole for No. 4 screw through center

NOTE 2: 1% Tolerance standard on all units shown. 0.1% supplied at extra cost.

FAST QUOTATIONS AND DELIVERIES — *IN-RES-CO* invites inquiries on all types of wire wound resistors for military or commercial applications in any quantity large or small. Modern expanded facilities insure prompt, efficient service on both standard and custom-built resistors.

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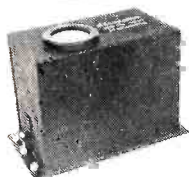
ADAPTERS



POWER SUPPLIES



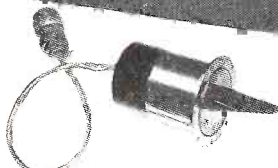
MODULATORS



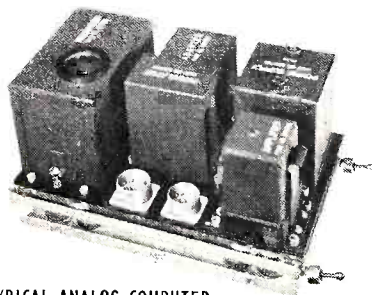
POSITIONING MECHANISMS



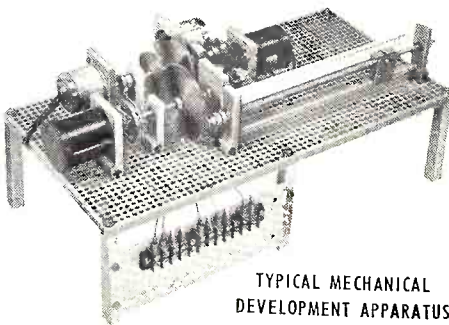
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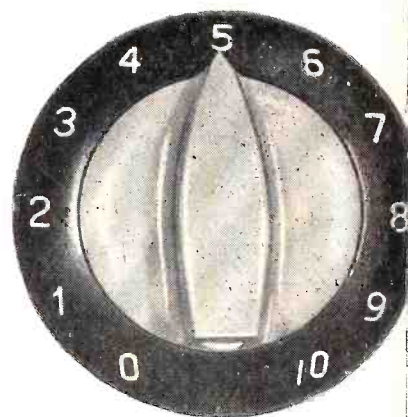
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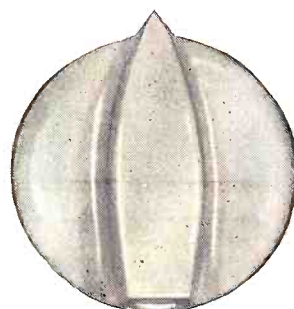
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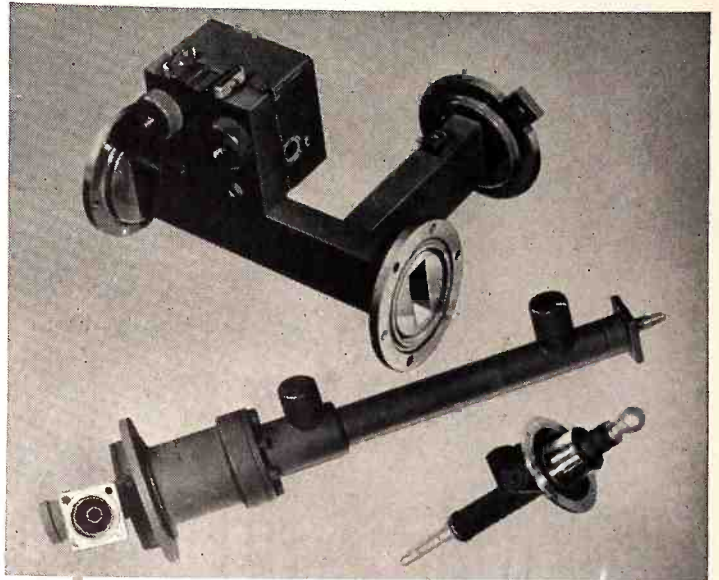
Rigid and Flexible WAVEGUIDES

TITEFLEX, INC., 534 Frelinghuysen Ave., Newark, New Jersey

There is nothing so important in a waveguide as electronic satisfaction. The price of a waveguide is usually small by comparison with the cost of manufacturing and testing the assembly in which the waveguide is used. Failure of a waveguide, therefore, to meet requirements might jeopardize a costly investment in labor and materials and increase operational failures.

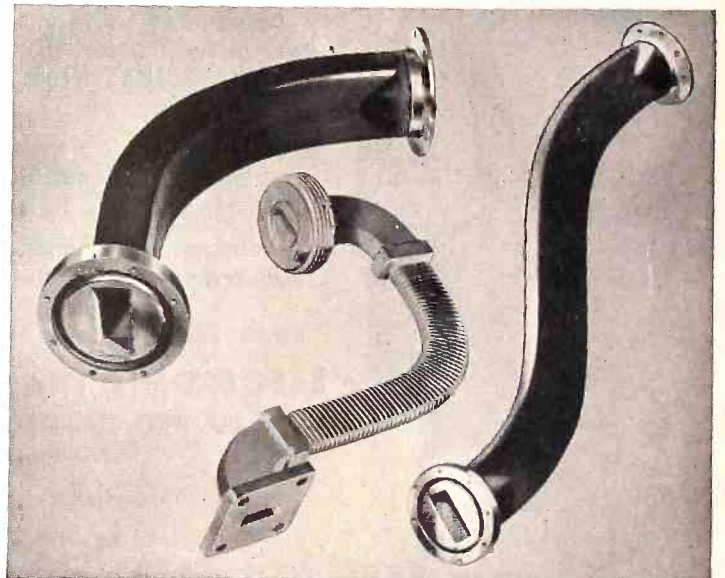
Titeflex Waveguides, both rigid and flexible, are competitive in price. They are much more. They are made to such close tolerances, and so carefully inspected and tested under quality control supervision that you can accept our test figures, if you choose to, without duplicating inspection.

Titeflex is valued as an authority in working out difficult waveguide problems; and as a source of dependable delivery—two points you may want to keep firmly in mind. We have the plant, the productivity, and the people—ready to help you. Write for information and free literature.



RIGID

Titeflex specializes in the design and fabrication of rigid waveguide components such as directional couplers, rotating joints, duplexers, mixers, adaptors.



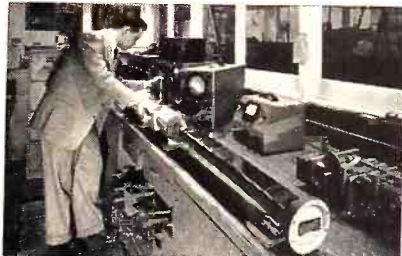
FLEXIBLE

Flexible (Waveflex) Waveguides are so fabricated that critical dimensions are retained regardless of twisting or bending. Flexible Waveguides improve design, compensate for expansion or movement, make assembly easy.

Remember this traffic stopper at the IRE Show. It's a torture test. Flexed well over 1,000,000 times, Waveflex flexible Waveguides gave no evidence of failure or loss of physical or electrical properties.



Waveguide Tests by this department without a thorough electrical back-up. Every single Titeflex flexible Waveguide is tagged before shipment with its test score JAN-W-287 specifications.



WAVEFLEX (Flexible Waveguide) Engineering Data

Band Letter	MATCHES RIGID WAVEGUIDE			ELECTRICAL PROPERTIES					PHYSICAL PROPERTIES MOLDED ASSEMBLIES				
	A-N Type	O.D.	I.D.	Frequency Band KMC/SEC	Wave Length cm.	Max. Attenuation db/Ft	Max. VSWR	Power Rating Mega Watt	Wave-Flex No.	Bend E Plane	Rad. H Plane	Twist Deg./ Ft.	Repeated Flexing E Plane
RG-69/U		6.66x3.41	6.50x3.25	1.12-1.70	20	.018	1.02	10	S6004-416	13	25	20	1,000,000
RG-48/U		3.0x1.5	2.84x1.34	2.6-3.95	10	.045	1.02	2.6	S6004-192	6	11	30	1,000,000
RG-49/U		2.0x1.0	1.872x.872	3.95-5.85	5	.063	1.04	1	S6004-128	3-1/2	5-1/2	35	2,000,000
RG-50/U		1.5x.750	1.372x.622	5.85-8.2	4.5	.10	1.05	.570	S6004-96	3-1/4	5	45	3,000,000
RG-51/U		1.25x.625	1.122x.497	7.05-10.0	3.5	.10	1.05	.440	S6004-72	3	4-1/2	45	3,000,000
RG-52/U		1.0x.50	.900x.400	8.2-12.4	3	.15	1.05	.25	S6004-64	2-1/2	3-1/4	60	3,000,000
RG-91/U		.702x.391	.622x.311	12.4-18.0	2	.2	1.08	.20	S6004-40	1-1/8	2.00	60	3,000,000
RG-53/U		.500x.250	.420x.210	18.0-26.5	1.25	.6	1.10	.10	S6004-32	1.00	1-3/4	60	3,000,000

Other Titeflex Products



The Titeflex Connector—One basic plug, 3 types of receptacles, 16 shell sizes, AN8-36, over 300 insert arrangements.



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AX-9902/5868



833A



857B



813



5870/AGR-9951



5894/AX-9903



VC25
VC50
VC100



891R
892R



889R-A

AMPEREX

ELECTRONIC TUBES
COMMUNICATION — RECTIFICATION — INDUSTRIAL — ELECTRO-MEDICAL
— RADIATION DETECTION — SPECIAL PURPOSE

TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE
BINARY ADDER		2J56	\$186.00	TETRODES		279A	\$355.00	5771	510.00
6047**		4J47	500.00	AX4-125A/6155	\$23.00	284D	17.50	5866/AX-9900	20.00
GEIGER COUNTERS		4J52	650.00	4X150A	48.00	HF300	35.00	5867/AX-9901	30.00
75N	\$10.00	4J57	500.00	AX4-250A/6156	35.00	308B	115.00	5868/AX-9902	50.00
75NB3	10.00	4J58	500.00	807	2.40	311CH	19.00	5923/AX-9904	150.00
90NB	20.00	4J59	500.00	813	18.00	342A	582.00	5924/AX-9904R	210.00
100C	35.00	725A	250.00	5895/AX-9905	6.00	343A	350.00	6077/AX-9906	2000.00
100CB	37.50	MERCURY RECTIFIERS		6075/AX-9907	225.00	343AA*	435.00	6078/AX-9906R	
100N	35.00	249B	\$9.00	6076/AX-9907R	275.00	450TH	77.00		2400.00
100NB	37.50	249C	9.00	6079/AX-9908	68.00	450TL	77.00	8002	160.00
120C	75.00	255B	145.00	TRIODES		473	165.00	8002R	190.00
120CB	77.50	266B	210.00	3X2500A3	\$198.00	498	500.00	TWIN TETRODES	
120N	75.00	315A	38.60	3X2500F3	198.00	501R	125.00	5894/AX-9903	\$19.00
120NB	77.50	575A	21.00	EC55/5861	25.00	502	125.00	6252/AX-9910**	
150N	50.00	673	22.50	HF60	17.50	502R	145.00	832A	12.90
150NB	52.50	857B	209.00	HF100	17.50	504R	175.00	VACUUM CONDENSERS	
153C	65.00	866A	2.25	111H	20.00	508/6246	500.00	VC6/20	\$22.50
200C	45.00	866AX	2.50	ZB120	20.00	750TL	137.50	VC6/32	24.50
200CB	47.50	869B	132.00	HF125	25.00	805	13.50	VC12/20	22.50
200N	45.00	872A	8.20	HF130	20.00	810	16.25	VC12/32	24.50
200NB	47.50	8008	8.25	HF140	20.00	833A	49.50	VC25/20	22.50
230N	30.00	MERCURY THYRATRONS		HF150	22.50	834	14.50	VC25/32	24.50
240C	35.00	FG17/1701/967/		HF175	22.50	838	13.75	VC50/20	26.50
240N	35.00	5557	\$8.50	HF200	30.00	845	13.75	VC50/32	28.50
HYDROGEN THYRATRONS		FG105/AX105	49.50	HF201A/468	28.50	849A	135.00	VC100/20	30.00
4C35	\$28.75	678	47.00	203A	13.75	849H	135.00	VC100A/20	37.50
5C22	53.45	5559	16.00	203H	25.00	851	300.00	VC100/32	33.00
5268/AX-9911†	28.75	5869/AGR-9950	22.50	204A	130.00	858	500.00	VC100A/32	40.00
6279/AX-9912†	53.45	5870/AGR-9951	90.00	207	240.00	859	500.00	VC250/20	70.00
INERT GAS THYRATRON		PENTODES		211	13.75	880	510.00	VACUUM DIODES	
2D21	\$2.00	332A	\$60.00	211C	20.00	889A*	210.00	222A	\$300.00
IGNITRONS		828	13.75	211D	20.00	889RA*	295.00	237A	435.00
5551/652	\$80.50	6083/AX-9909	13.50	211H	22.50	891	223.00	VOLTAGE REGULATORS	
5552/651	121.00	SECONDARY EMISSION PENTODE		211I	104.00	892	223.00	85A1/OE3	\$3.00
5553/655	265.00	EFP60	\$8.75	212E	104.00	892R*	362.00	85A2/OG3	3.00
5554/679	190.00	SUBMINIATURE PENTODES		212F	104.00	893A*	630.00	XENON THYRATRONS	
5555/653B	370.00	6007/5913	\$1.50	220C	365.00	893AR*	1150.00	3828	\$8.50
MAGNETRONS		6008/5911	1.50	228A	325.00	HF-3000	500.00	4832	12.00
2J48	\$250.00			232C	560.00	ZB3200	350.00	5685/C6J	31.90
2J55	186.00			241B	115.00	5604*	540.00		
				242C	15.00	5619	390.00		
				HF250	35.00	5658	510.00		
				250TH	33.00	5666	230.00		
				250TL	33.00	5667*	310.00		
				251A	300.00	5736	\$160.00		

† The Amperex types 6268/AX-9911 and 6279/AX-9912 are improved versions but completely interchangeable in every respect with the standard types 4C35 and 5C22 respectively. They have a minimum guaranteed life of 1000 hours due to the self-contained, self-regulating source of hydrogen.

RENEWAL PRICES* ON RADIATOR TYPE FORCED AIR-COOLED TUBES:

TUBE TYPE	USER'S NET
343AA	\$405.00
889RA	275.00
891R, 892R	342.00
893AR	1,000.00
5604	510.00
5667	290.00

*These prices currently apply when a new tube is purchased and a radiator and crate are returned prepaid in good condition with the replacement order.

HELPFUL CHARTS AND LITERATURE FREE: Write for set of INTERCHANGEABILITY CHARTS, information at a glance, RAPID TUBE DATA REFERENCE TABLES, 19 pages of condensed information arranged for quick reference. Address your distributor or Amperex direct.

** Price on request.



AMPEREX

ELECTRONIC CORP.

230 DUFFY AVE., HICKSVILLE, L. I., N. Y.

HIGH VOLTAGE



MODEL LAB-40

CONTINUOUSLY VARIABLE REGULATED 25 TO 40 KV DC POWER SUPPLY

Unit has a 4 to 6 KV focus tap for use with flying spot kinescope recording and television projection tubes, etc. Regulations of 0.5% at 1 milliamperes. Available either with locking controls or standard knob.

Dimensions: 19" wide x 12 1/4" high x 15" deep

With Meter \$620 Net
Less Meter \$545 Net

MODEL LAB-30PN

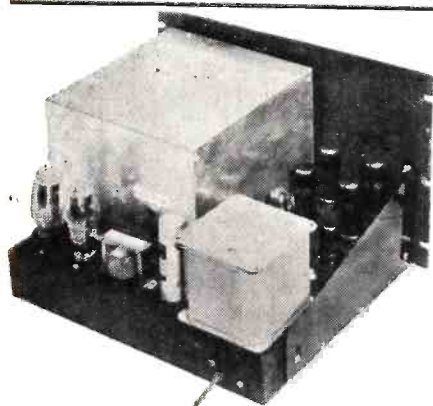
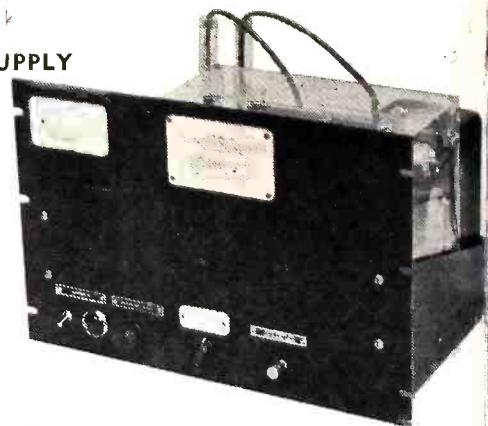
REVERSIBLE POLARITY—CONTINUOUSLY VARIABLE 1 TO 30 KV DC POWER SUPPLY

Regulated DC Power Supply with regulations of 0.5% at milliamperes. Up to 2 milliamperes may be drawn from 20 KV down. This 16 tube unit is of the RF type consisting of a separate oscillator and buffer feeding the power oscillator into a doubler rectifier. Regulations accomplished through feed-back into a DC amplifier plus simultaneous output control of the buffer. Polarity reversible from front panel. Standard Rack Model—19" wide x 12" high x 13" deep. Standard Bench Model—21" wide x 14" high x 15" deep.

With Meter \$670 Net
Less Meter \$595 Net

MODEL LAB-30 is a positive polarity output regulated High Voltage DC Power Supply with same electrical characteristics and dimensions as the LAB-30PN.

With Meter \$570 Net
Less Meter \$495 Net

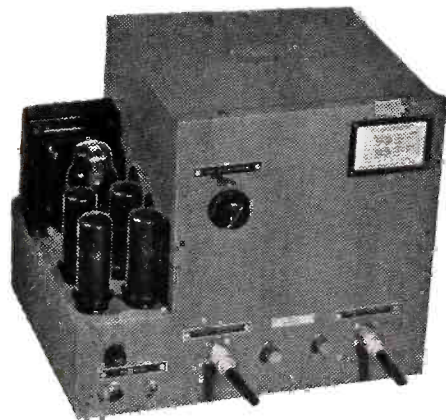


MODEL RG-30M

CONTINUOUSLY VARIABLE 15-30 KV REGULATED DC POWER SUPPLY

A high grade supply which incorporates a voltage tap in the range of 4 to 6 KV for use with 5ZP16, 5TP4 and flying spot tubes. Regulations better than .5% at 1 milliamperes. In wide use for theatre and transcription recording systems. Dimensions of HV unit—19" x 12 1/4" x 13".

RG-30M.....\$295 Net



UNIT SHOWN LESS FRONT PANEL

MODEL PN-30R

REVERSIBLE POLARITY CONTINUOUSLY VARIABLE
1-30 KV UNREGULATED DC POWER SUPPLY

A light, compact unit in wide use for insulation testing, precipitators and laboratory research. Polarity reversible from front panel. Current output—approx. 2 milliamperes at 20 KV; 250 microamperes at 30 KV. Input—110 V AC 60 cycles. Dimensions—19" x 12 1/4" x 13".

PN-30R (Rack Model).....\$205 Net

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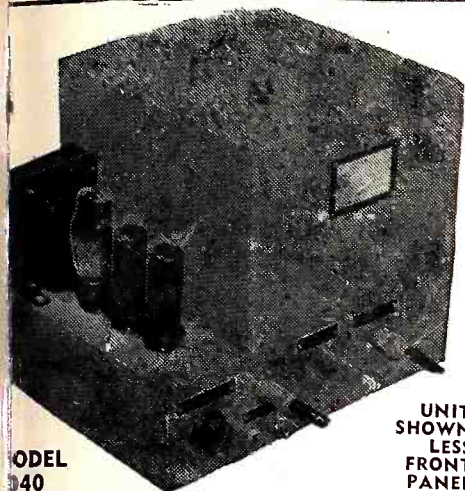
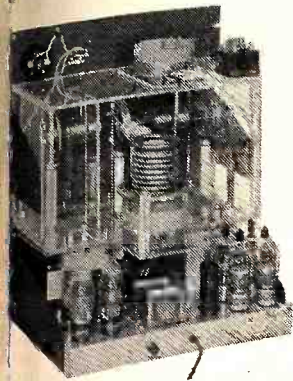
HIGH VOLTAGE

MODEL PN-60

REVERSIBLE POLARITY RF DC POWER SUPPLY

Polarity changes made on front panel. Continuously variable from 0 KV to 60 KV. Current output 1 milliamperes at 60 KV. Overall Dimensions 22½" x 21" x 15". Ideal for electrostatic paint spraying, capacitor charging and testing as well as many other uses.

PN-60 Complete with meter \$675 Net



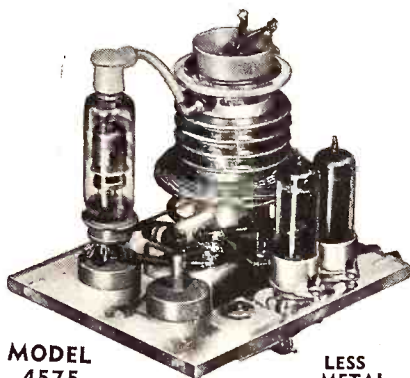
MODEL 2040

UNIT SHOWN LESS FRONT PANEL

40 KILOVOLT DC POWER SUPPLY

Available with either positive 40 KV output or negative 40 KV output. A compact high quality unit adaptable for nuclear physics, electrostatic paint spraying, dust precipitation, insulation testing, television and other industrial uses. Has voltage range of approximately 15 to 40 Kilovolts. If power supply for TV use is required, a voltage output of approximately 4 to 6 KV is available through a tap. The 15 to 40 KV variance in voltage controlled through a knob on the front panel. Output voltages supplied through a 4 ft. length High Voltage safety cable. Dimensions: 19" L x 14" W x 12" H. Specify desired polarity when ordering.

MODEL 2040 \$136 Net



MODEL 4575
4½ KV
POWER SUPPLY

LESS METAL HOUSING SHOWN

This compact, well designed, ruggedly built DC supply has an output voltage of 4½ KV at 1 milliamperes. By varying the DC input the output voltage can be varied from approx. 1 KV to 7½ KV. Dimensions 5½" H x 5" D x 4¼" W.

MODEL 4575 less low voltage DC supply \$32.50 Net

HIGH VOLTAGE METER

0-30 KV SPECIFICATIONS

VOLTAGE RANGE: 0-30 Kilovolts —at 50,000 ohms per volt sensitivity. Measures high voltage circuits with very light loading.

POLARITY REVERSING SWITCH:

Permits measuring of positive or negative voltages from ground with maximum safety. Switch may be operated without arcing while the voltage is being applied. Off-position of this switch locks the sensitive meter movement for transportation.

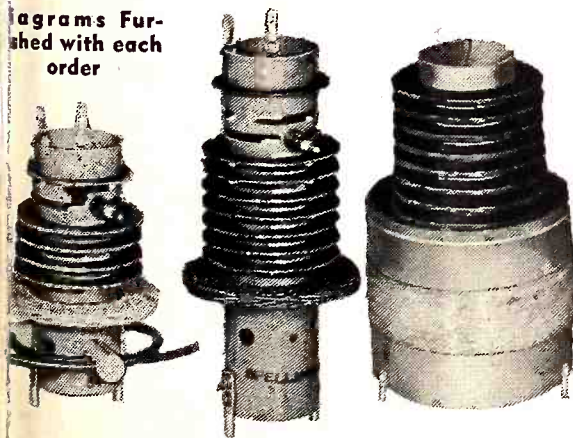
OVERALL SIZE OF CASE: 7" wide, 9" long, 5" high.

MODEL 451 \$79.50 Net

MODEL 452 . . Dual Range
0-15, 0-30 KV \$105 Net

HIGH VOLTAGE RF STEP-UP COILS

Diagrams Furnished with each order



5 KV

Secondary Height 3½"
Secondary Windings . . . 1¾"
consisting of 4 Pie Windings
Primary Diameter 2¼"

Secondary Voltage Output 5 KV
Secondary Current 2 Milliampers
Approx. Frequency . . . 175 KC
\$4.80 Net

10-15 KV

Secondary Height 5¼"
Secondary Windings . . . 1¾"
consisting of 7 Pie Windings
Diameter 2½"

Secondary Voltage Output 10-15 KV
Secondary Current 2 Milliampers
Approx. Frequency . . . 175 KC
\$12.00 Net

35 KV

Secondary Height 7"
Secondary Windings . . . 3" dia.
consisting of 10 Pie Windings
Primary (separate from secondary)
Height 4"
Diameter 4¼"

Secondary Voltage Output 35 Kilovolts
Secondary Current 5 Milliampers
Approx. Frequency . . . 70 KC
\$42.00 Net
25 KV—Same as 35 KV except Secondary Height . . 6"
\$36.00 Net

RF FILAMENT TRANSFORMERS

A self-resonant auto transformer for use with type 1B3 Rectifier tube. Will operate with Spellman HV coils \$1.50
TUNING PADDER for Filament Transformer 0.58

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CAPACITORS



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Featuring SILICONE BUSHINGS for peak performance at high temperature operation.



SILICONE BATHTUB TYPE capacitor, oil impregnated, hermetically sealed, and tested at twice rated voltage to meet all specifications.



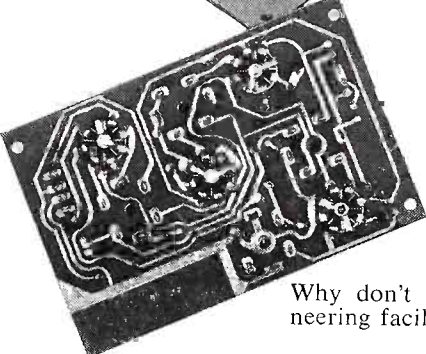
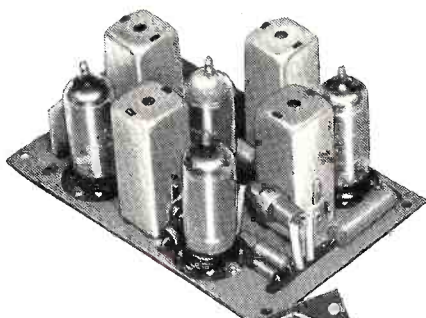
GLASS SEALED TUBULAR TYPE capacitor, oil impregnated, hermetically sealed to meet all specifications.

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for practically any electronic unit



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- Timing Devices
- Industrial Controls
- Business Machines
- Guided Missiles
- Radar
- Television
- Motor Controls

ELECTRALAB printed circuits MERELY SAVE YOU MONEY . . . by . . .

- Cutting assembly time and labor costs
- Eliminating certain operations
- Lowering reject waste
- Reducing inventory costs
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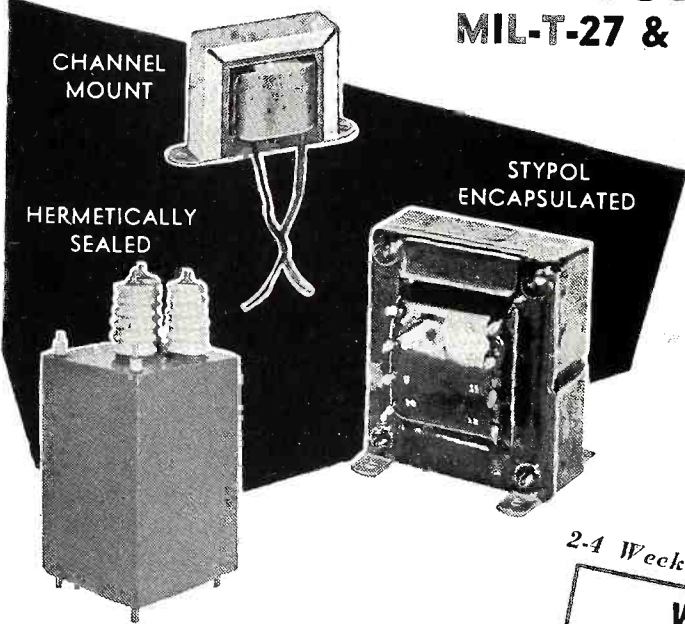
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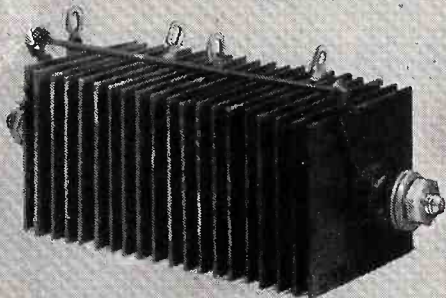
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Seletron

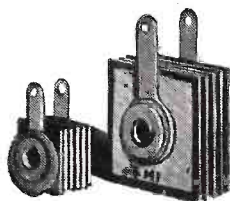
SELENIUM RECTIFIERS

MILLIONS IN SERVICE THROUGHOUT THE WORLD



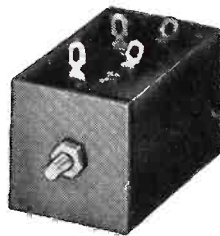
INDUSTRIAL TYPE RECTIFIERS

For a multiple of applications; power supplies, magnetic amplifiers, electroplating, battery charging, etc. Available in current rating from milliamperes to thousands of amperes, and from a few volts to thousands of volts.



HALF-WAVE RADIO TYPE RECTIFIERS

Economical rectifiers for many and varied applications. Especially applicable for radio and TV. Available in current ratings through 500 ma.

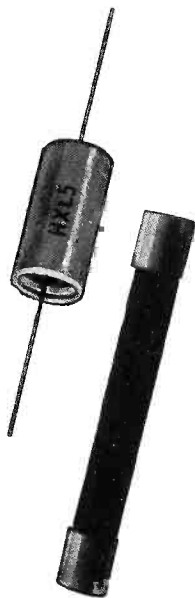


ENCAPSULATED RECTIFIER TYPES

For adequate protection for military and other stringent uses. Recommended for use where size and weight are important considerations; such as aircraft applications.

CARTRIDGE HIGH VOLTAGE ASSEMBLIES

With either pigtailed or ferrules. These versatile cartridge assemblies rated at 5 mils are available in voltages ranging to thousands of volts.



See our listings of Germanium Diodes and Germanium Transistors on the page opposite.



HERMETICALLY SEALED UNITS

Built to special requirements to meet unusually stringent conditions. Designed to meet individual needs.



HIGH TEMPERATURE TYPES

These selenium rectifiers are capable of operating in an ambient temperature of 125° C., with no increase in the size of the cell as compared with a similar rectifier operating in a normal ambient.

Our engineering department will be glad to aid you in the solution of your rectifier problems. Submit your requirements and let us make recommendations...without obligation, of course! See our catalog in Sweet's Product Design file...or write us requesting Bulletin E.

Seletron and Germanium Division

RADIO RECEPTOR COMPANY, INC.



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RR Germanium Diodes

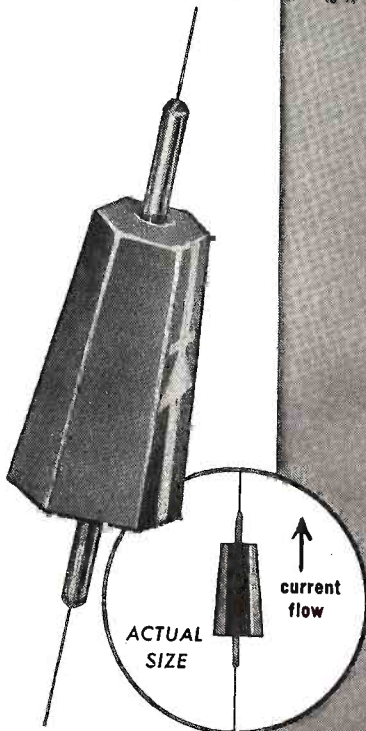
FEATURING POLARITY AT A GLANCE!

The taper of the diode case allows polarity identification at a glance or at a touch thus speeding up assembly and reducing the possibility of error in connecting the diode into the circuit. Taper also prevents rolling, especially when the leads are cut off to permit mounting the diode in clips!

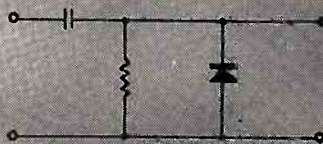
TYPES AVAILABLE

1N34	1N55	*1N69
1N34A	1N55A	*1N70
1N38	1N58	1N72
1N38A	1N58A	1N75
1N48	1N63	*1N81
1N51	1N64	1N110
1N52	1N65	

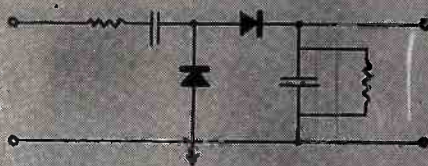
*JAN type



DETECTOR CIRCUIT



CLAMPING CIRCUIT



COUNTING RATE CIRCUIT

RR Germanium Transistors



POINT CONTACT TRANSISTORS

Available in a variety of stable controlled types suitable for both fast and medium speed switching circuits and high frequency amplifiers. Advanced mechanical design for economical production... Heat conducting metal case; standard basing; choice of soldering or plug-in.



PHOTO TRANSISTORS

To operate power relay with one junction transistor as DC amplifier.



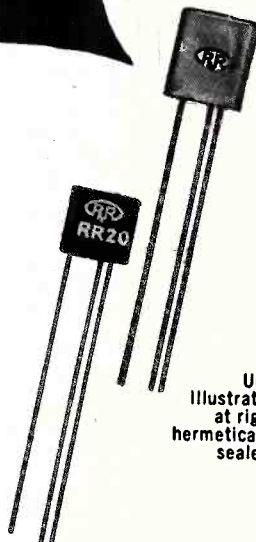
JUNCTION POWER TRANSISTORS

... For audio power up to 2 watts.



PNP JUNCTION TRANSISTORS

Tiny, stable high gain units, most economical of power, may be soldered in place or socketed in a recommended RTMA transistor socket. They are suitable for audio amplifiers, servo amplifiers and transformer-coupled carrier amplifiers. Available in plastic or hermetically sealed in metal and glass.



Unit illustrated at right hermetically sealed.

Our engineers will be glad to offer suggestions regarding your Germanium Diode and Transistor applications without obligation. Write to Dept. E.

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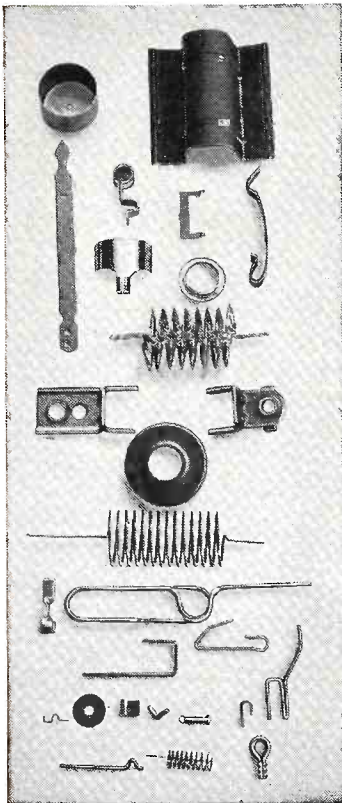


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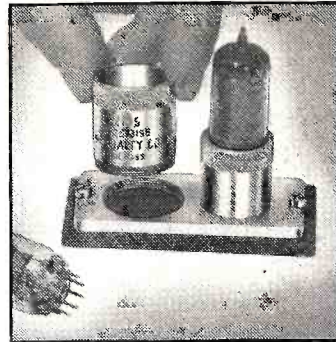
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Dual Types for Straightening 7-Pin and 9-Pin Tubes
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For chassis and bench mounting. Ruggedly constructed. Stainless steel straightening dies of precision accuracy. Knurled and threaded aluminum guides screw into aluminum base plate. Broken pins easily removed without disturbing base plate mounting. Tested and approved by U. S. Army Signal Corps for use by the Armed Services.

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PUSH-PULL MAGNETIC AMPLIFIERS—High gain, high-performance, completely packaged Magnetic Amplifiers. Designed to drive two phase induction servo motors. Polarity reversible D.C. input signal is amplified and results in phase reversible A.C. output. Demodulators to work from A.C. signals with these amplifiers are available.

ADJUSTABLE MAGNETIC SERVO AMPLIFIERS—Similar to Push-Pull Magnetic Amplifiers except that means are provided to stabilize servo loop with stabilizer networks. Data given includes servo loop performance for use with A.C. and D.C. transducers.

MAGNETIC AMPLIFIER SERVO SYSTEMS—Servo systems (single speed and 1-and-36 speed). Specific servo loop performance is published.

SATURABLE TRANSFORMERS—Lower gain Push-Pull Magnetic Amplifiers for use on 400 cps powerlines with A.C. or D.C. operated double triode preamplifier. When A.C. is applied to the plates B-power supply is eliminated and tube acts as phase sensitive demodulator for A.C. signals. Designed for servo applications to drive two phase induction servo motors.

TRANSISTOR MAGNETIC AMPLIFIERS—The *TRANSI-MAG**, a new standard transistor magnetic amplifier, to work with our standard line of magnetic amplifiers. Input sensitivity: 0.1 volt or better.

The New Automatic Universal TRANSISTOR CURVE TRACER

Specifications:

TRANSISTOR TYPES: NPN-PNP — Junctions — Point Contacts

TRANSISTOR CONNECTION: Grounded base or grounded emitter

TRANSISTOR CURVES: Output (V_c vs. $I_c | I_e$); Transfer (V_e vs. $I_c | I_e$)

VERTICAL CALIBRATOR: 0-1, 10, 100 volts

HORIZONTAL CALIBRATOR: 0-1, 10, 100 volts

QUADRANTS: I, II, III, IV

SWEEP VOLTAGE: 0-100 volts

BIAS CURRENT: Zero plus eight equal increments. Stepped automatically or manually.

FIXED BIAS CURRENT INCREMENTS: 10, 20, 50, 100, 200, 500, 1000 microamperes

CONTINUOUSLY VARIABLE BIAS CURRENT INCREMENTS: 0-1 milliampere

MANUAL BIAS RANGE: 0-8 milliamperes

BIAS CURRENT METER: 0-100, 200, 500, 1000 microamperes full scale 0-2, 5, 10 milliamperes full scale



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LOAD RESISTANCE: 100-10,000 ohms
DIMENSIONS: 16"x10"x8"
ACCESSORIES FURNISHED: Transistor receptacle
ACCESSORIES AVAILABLE: Transistor forming attachment

USES: Designing transistor circuits—comparing, matching and selecting—detecting anomalies—studying effects of temperature, age, normal usage, overloading—detecting failures and cause.

FEATURES: Tests NPN, PNP, Junction, Point Contact Transistors — flexible to accommodate new types.

Dynamically plots entire family of curves simultaneously on standard laboratory DC oscilloscope.

Function switch selects: output or transfer curve in grounded base or grounded emitter connection.

Calibrating axis generated internally as integral part of display are always in correct quadrant.

Automatic or manual operation by means of stepping relay.

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Measures current gain.

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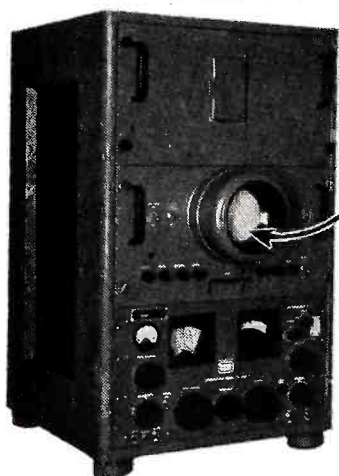


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RADIO FREQUENCY SYSTEMS AND INSTRUMENTATION



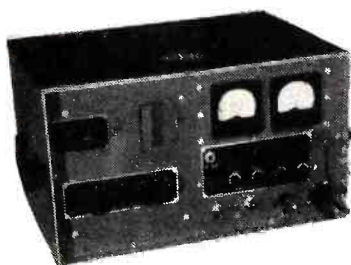
DFG-2
AND
DFM-3

RADIO DIRECTION FINDERS FOR EVERY APPLICATION

LF, HF and VHF models can be supplied for every application. When requesting information, describe intended use.

STANDARD MODELS

MODEL	FREQ. RANGE	ANTENNA	INDICATION
DFG-1	0.54-20 Mc	Crossed Adcock with goniometer	Aural-Null
DFG-2	0.54-30 Mc	4-element spaced aerial	Automatic Visual Indication
DFM-1	0.54-30 Mc	Rotatable Loop	Aural-Null
DFM-2	0.54-20 Mc	Crossed Loops with goniometer	Aural-Null
DFM-3	0.54-30 Mc	Crossed Loops with goniometer	Automatic Visual Indication



MODEL 2400 CRYSTAL CONTROLLED SIGNAL GENERATOR

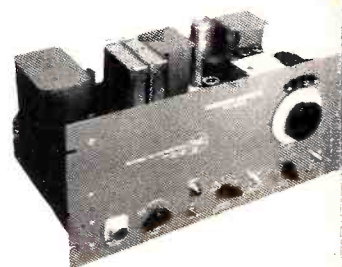
Positive crystal control from 150 Kc to 150 Mc; precision zero-leakage measurement of output level from 1 to 100,000 microvolts; and metered modulation free from FM distortion. These features of the Model 2400 Signal Generator make it possible to preset channels "on-the-head," to

know receiver sensitivity without guessing, and to standardize squelch threshold control settings. Ideal for testing and aligning airline radio equipment, radar IF strips and TV tuners. Write for additional information.

MODEL 1232B SECONDARY FREQUENCY STANDARD — Rack Mounted

Here is a versatile precision instrument every laboratory needs for frequency comparison, measurement and synthesis, useful from 1 KC TO ABOVE 1000 MC. Oven-controlled crystal oscillator in special circuit provides accuracy better than 1 part per million. Self-contained crystal-controlled interpolation feature permits fast, direct measure-

ment of frequency. Harmonics delivered are strong and uniform in amplitude. Standard harmonic intervals are 1, 2, 5, 10, 50 and 100 Kc. Output level for 100 Kc harmonics: 100 millivolts from 100 Kc to 5 Mc; 50 millivolts to 75 Mc; 25 millivolts or more to 85 Mc.



SERVOTHERM INFRARED RADIATION INSTRUMENTATION



1312
BOLOMETER
1321
PREAMPLIFIER

SERVOTHERM THERMISTOR BOLOMETERS are small, rugged, fast sensitive infrared radiation detectors, suitable for spectrophotometric, industrial, and military applications. Furnished with SERVOFRAX window, sensitivity extends from 1 to 13 microns wavelength (other windows also available). Typical time constant, 5 milliseconds maximum. Write for data sheets TDS-1312 and TB-1312.



1350 AMPLIFIER
1330 POWER
SUPPLY

RECORDING AMPLIFIER Model 1350 includes a.c. amplifier, decade attenuator, and detector. It drives 5 ma. recorder to record envelope of 1 to 1500 cycle carrier (as used in spectrophotometry). Designed for use following 1321-2 preamplifier or wherever a 5-5000 c.p.s. amplifier or amplifier detector is required.



1322 PREAMPLIFIER

SERVOTHERM LOW-FREQUENCY PREAMPLIFIERS are low-noise, low-microphonic, stabilized miniature preamplifiers for audio frequencies and down to 1/2 c.p.s. at microvolt and millivolt input levels. Suitable for use in radiation measurement, geophysical, electro-medical, etc. Model 1321 also serves as bolometer mount. Model 1322 is a potted plug-in style.

SERVOTHERM LOW-FREQUENCY PREAMPLIFIERS



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SERVOTHERM POWER UNIT is a superior regulated power supply having extremely low noise frequencies down to 3 c.p.s., especially designed to power a Servotherm Bolometer and Preamplifier. Will also power Recording Amplifier. Operates from 115 volts 60 cycles.

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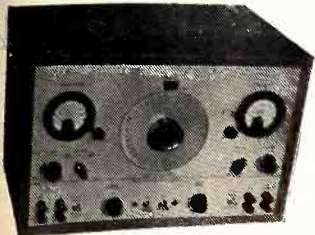


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SERVOFRAX GLASS transmits infrared and far infrared radiation from 0.6 to 13 microns wavelength. Chemically and physically stable, it is superior to other available materials. Index of refraction is 2.4 and transmission 72% in the 2-8 micron region. Raw glass and finished lenses are available. Write your requirements.



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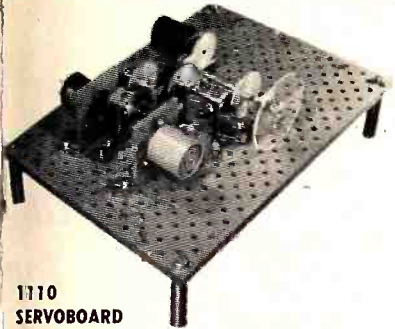


1100 SERVOSCOPE

SERVOSCOPE is a signal generator with synchronized phaseable sweep. Produces sub-audio sine waves, square waves, and modulated carrier signals for testing servos and other very low frequency amplifying or control systems. Trans-

fer characteristics, frequency and phase response, and step-function response may be quickly evaluated. Hundreds of Servoscopes are saving their cost to our customers by speeding up otherwise tedious measurements.

Output 0-25 volts. Synchronized sweep 0-150 volts. Operates on 50 to 800 c.p.s. carrier. Accuracy, frequency 1½%, phase 1°. Input 115 V. 60 c.p.s.
Model 1100A—0.1 to 20 c.p.s.
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1170 SERVOBOARD

SERVOBOARD is a set of precision mechanical parts, including an ample assortment of gears, shafts, bearings, hangers and mounting plate, which, when coupled to the necessary motors, tachometers, synchros, potentiometers and amplifiers, rapidly builds a flexible experimental mechanical assembly of a servo system, com-

puter or regulator. The Servo board was developed as an aid to the design of servomechanisms by providing means for quickly synthesizing the electromechanical parts of the control system. Components may be located in an infinite number of positions because of the hairpin clamp method of assembly employed.



1120 SERVO AMPLIFIER

SERVO AMPLIFIERS with self-contained power supplies:

MODEL 1120 is a 60 c.p.s. amplifier with built-in 90° phase shift. Three matched inputs permit operation as

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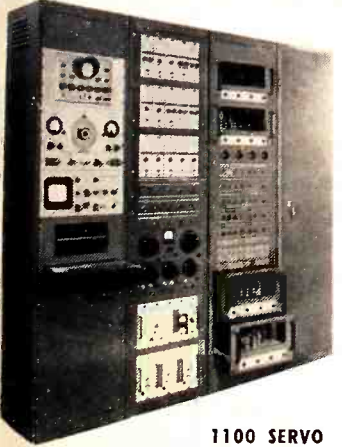


1121 SERVO AMPLIFIER

MODEL 1121

A small and light 400 c.p.s. amplifier. Three inputs (two a.c. high gain and one d.c. low gain) are provided. Output, 10 watts continuous, 18 watts

reversing or intermittent. Also available without cover for installation as a component.



1100 SERVO LABORATORY

SERVO LABORATORY

This analysis and synthesis equipment includes a selected list of equipments required in the Servo Test and Development Laboratory. These equipments are grouped in a carefully arranged package to permit the servo designer readily to synthesize a wide variety of systems from standard components and test them with maximum efficiency and time economy. Complete flexibility is provided by

standardized interchangeable, plug-in electronic components and efficient and versatile mechanical breadboards. Electrical interconnections are facilitated by terminating the various circuits in jack panels which can be quickly cross-connected by patch cards as desired. Many sizes and arrangements of Servo Laboratory equipment are available — write your requirements.

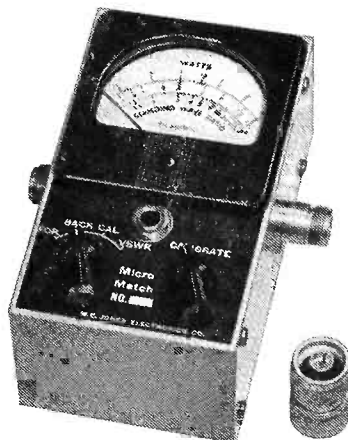
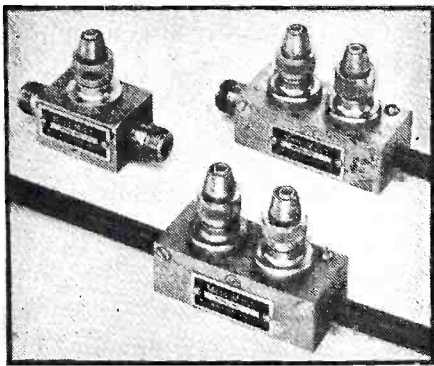
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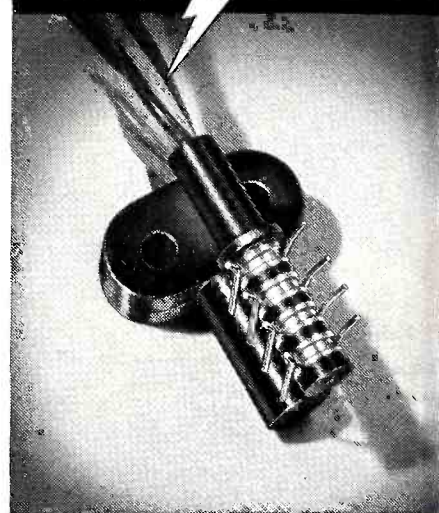
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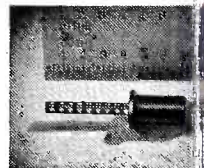


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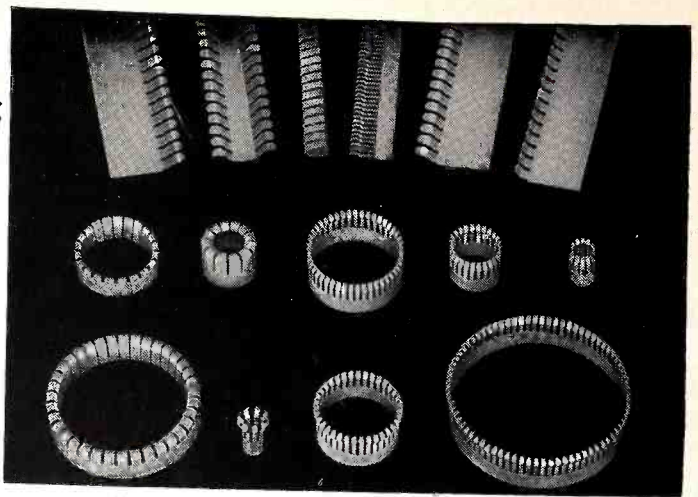
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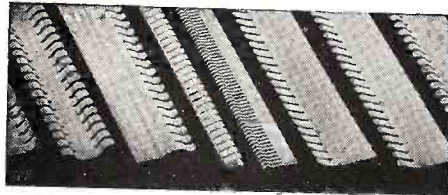


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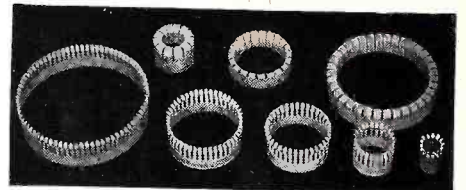
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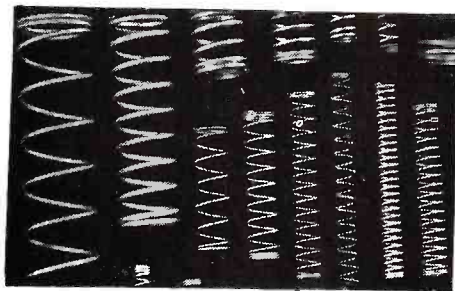
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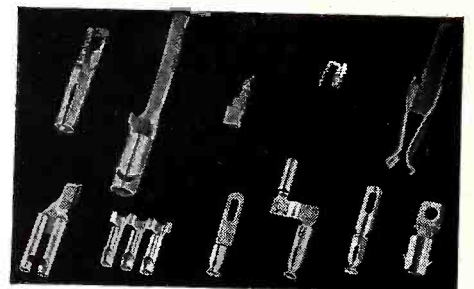
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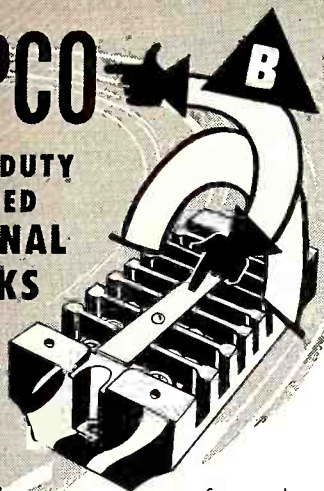
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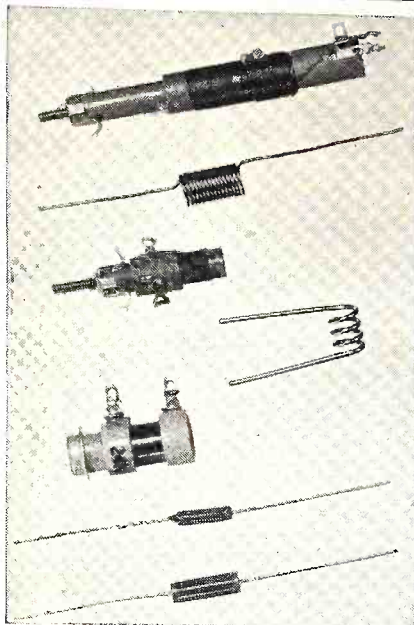
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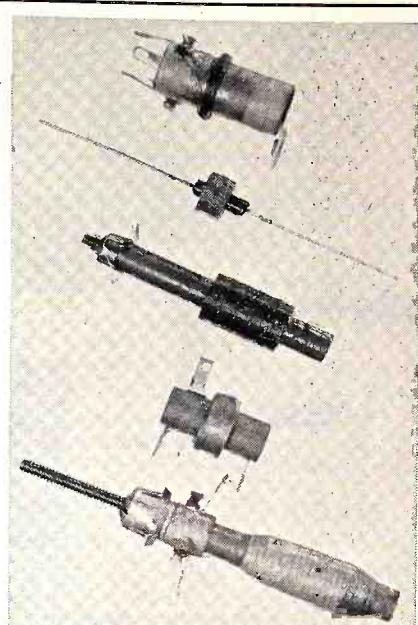
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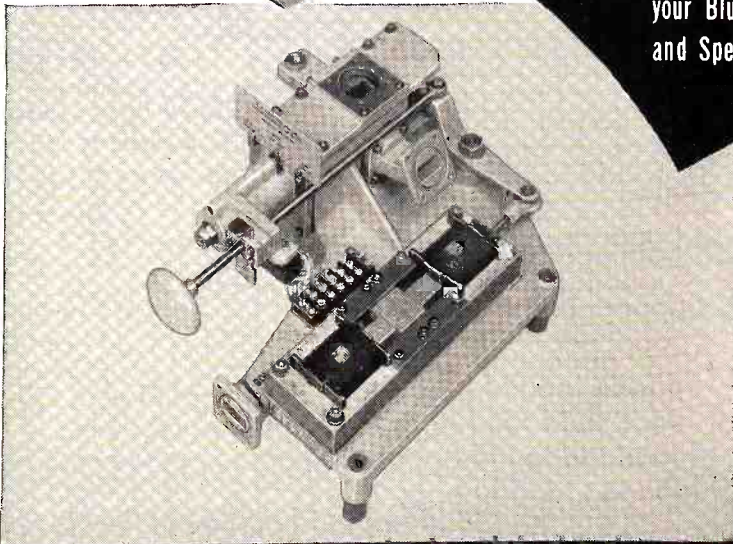
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Klystron Power Supply TVN-11

Well-regulated, low-ripple-content power supply provides all necessary voltages for operation, modulated or unmodulated, of small Klystrons and other low-power reflex tubes. Internal modulator for square-wave or saw-tooth modulation. Internal metering for critical currents and voltages. Price.....\$3200

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May be operated broadband or selective between 500 and 5000 cycles. Protective circuits prevent burnouts of bolometers and crystals. Output may be fed to meter or d-c recorder. Price.....\$3600

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Checks modulation for compliance with F. C. C. regulations. Complete coverage 25-174mc in two bands, no crystals or plug-in coils. Meter shows swings up to 20 kc. Flasher shows excessive voice peak modulation. Price.....\$3300

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. . . FM tuner with selectable A.C. cathode-follower output, audio inputs for PHONO, TV, and RECORDER, self-contained power supply. Net price.....\$900

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. . . FM/AM tuner engineered for use with the modern, full-conductivity amplifier. Only two controls — for tuning and one to select OR/AM/FM with AFC/FM. Built-in power supply. Net price....\$1600

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NATVAR FLEXIBLE ELECTRICAL INSULATING MATERIALS

VARNISHED FABRICS AND PAPERS

VARNISHED CAMBRIC

cut for application to regular smooth surfaces; bias for irregular surfaces. Supplied in all standard sizes and thicknesses, in yellow or black and greasy, tacky, mica-dusted, and dry finishes. Yellow has higher resistance to mineral oils and is therefore used extensively in oil immersed applications; black has better electrical qualities and is therefore recommended for applications where dielectric strength, power factor and insulation of these qualities even under humid conditions is important. Varnished cambric is manufactured to conform to the latest revisions of A.S.T.M. Standards and A.S.T.M. Specifications. Full width rolls, 25 yd. and 50 yd.; sheets, 36" x 36" and 24" x 36", standard; other lengths and sizes on special order.

VARNISHED CAMBRIC TAPE

cut or seamless bias, in all standard widths and thicknesses, yellow or black, greasy, tacky, mica-dusted or dry. Characteristics same as for varnished cambric. Accurately slit for use in taping heads. Standard widths 36 yd. and 72 yd. rolls.

VARNISHED CANVAS AND DUCK

recommended for applications where electrical insulation is subject to mechanical strain and abuse. Widely used as phase insulation in electrical machines. These high strength fabrics are coated with the same type varnishes as Natvar varnished cambric. Full width rolls, 25 yd. and 50 yd.; sheets 36" x 36" and 24" x 36", standard; other lengths and sizes on special order.

VARNISHED SILK

high dielectric strength insulation with great flexibility and mechanical strength. Particularly applicable to relays, magnetos and other electrical parts used in airborne equipment, where space and weight are important considerations. Available in yellow only; finish, dry. Full width rolls, 25 yd. and 50 yd.; tapes, 25 yd. and 50 yd.; bias cut strips approximately 1/2 in.; standard; other lengths on special order.

VARNISHED RAYON

used as an alternate for varnished silk, and used in substantially the same applications. High tensile and dielectric strength with exceptional electrical properties. Available in yellow only; finish, dry. Full width rolls, 25 yd. and 50 yd.; tapes, 25 yd. and 50 yd.; bias cut strips approximately 1/2 in.; standard; other lengths on special order.

VARNISHED FIBERGLAS

insulation (130°C) used primarily to insulate equipment which operates at temperatures above the normal safe working range of varnished cambric. Permits higher current densities with consequent reduction in size and weight. Has great mechanical strength and excellent dielectric properties. Available in standard weave or open-weave; yellow or black; standard commercial sizes and thicknesses; standard finish, dry; other finishes on specification. Full width rolls, 25 yd. and 50 yd.; sheets, 36" x 36" and 24" x 36"; tapes, 36 yd. and 72 yd.; standard; other sizes on special order.

GLASS COATED FIBERGLAS

insulation (180°C) used wherever reduction of size and weight are important. Retains its excellent mechanical and dielectric properties at high temperatures. Full width rolls, 25 yd. and 50 yd.; tapes, 36 yd. and 72 yd.; standard; other lengths on special order.

VARNISHED PAPERS

highly inert rope and kraft stocks selected for uniform thickness, high dielectric strength and coated with highest grade electrical varnish. Yellow varnished condenser type tissues, single or multiple ply; black varnished heavy papers, single ply. Full width rolls, single ply, 25 yd. and 50 yd.; multiple ply, 25 yd.; sheets, 36" x 36" and 24" x 36"; tapes, 36 yd. and 72 yd., standard; other sizes and lengths on special order.

COMBINATION INSULATIONS

Slot cell insulation is a combination of 100% rag paper stock firmly cemented to a layer of varnished cambric, either straight or bias cut. The high dielectric strength and moisture resistance of Natvar varnished cambric with the toughness and abrasion resistance of rag paper make a slot insulator which will withstand pounding and chafing without impairment of its electrical properties. Available in black and yellow; full width rolls, 25 yd. and 50 yd.; sheets, 36" x 36" and 24" x 36", standard; other lengths and sizes on special order.

Aboglas® insulation is a new class B insulation (130°C) consisting of a layer of varnish saturated asbestos paper sandwiched and securely bonded between two layers of varnished open-weave Fiberglas. It is less expensive than mica combinations and does not flake. Excellent resistance to breakdown even under extreme heat, moisture, abrasive dust, oil and grease. Standard sheets approximately 36" x 36"; other sizes on special order.

Other duplex and triplex composite insulations such as silicone coated Fiberglas, Quinorgo, Mylar, etc. are also available.

FLEXIBLE TUBING AND SLEEVING VARNISHED OR LACQUERED

Electrical grade rayon (class A) or Fiberglas (class B) braid coated or saturated with high grade electrical varnish or lacquer. Available in all NEMA grades and standard A.S.T.M. sizes. Wide range of vivid colors for coding. Standard lengths, 36"; sizes #20 to #10 available in 500 ft. spools in lacquered only. Cut pieces 3/8" or longer furnished on specification.

EXTRUDED PLASTIC TUBING AND TAPE

NATVAR 400 VINYL TUBING AND TAPE

Natvar 400, for applications requiring high resistance to both heat and oil, is approved by Underwriters' Laboratories for continuous operating temperatures of 105°C. It remains flexible under continuous operation immersed in hot oil. It is a well balanced plastic that is tough, elastic, flexible, resistant to abrasion and tear, inert and resistant to ozone, oils, waxes, alkalis, acids and most solvents. Available in transparent, black, opaque white, yellow, red, green, blue, and brown. Tubing is stocked #24 to #15 in 500 ft. spools; #14 to 1/2" in 100 ft. coils; 9/16" to 1 1/4" in 50 ft. coils; 1 1/2" and larger in 25 ft. coils; cut pieces 3/8" or longer on specification. Tapes, standard length, 36 yd.; standard color, black.

V.I.T. 200 VINYL TUBING

V.I.T. 200 is a general purpose tubing with excellent flexibility through a temperature range of -40°C. to +85°C. Will not support combustion. Shows no disintegration or flaking when immersed in oil. In general has the same inherent characteristics as Natvar 400, but slightly higher tensile strength, averaging 3600 p.s.i. Stocked in same lengths as Natvar 400. Cut pieces 3/8" or longer furnished on specification.

NATVAR STYROFLEX® FILM

Specially processed flexible polystyrene film developed for insulation of UHF coaxial cables and capacitors. Excellent mechanical and electrical properties. Available in thicknesses .0004" and thicker in precision cut tapes up to approximately 10" width.

EXTRUDED PRINTED MARKERS

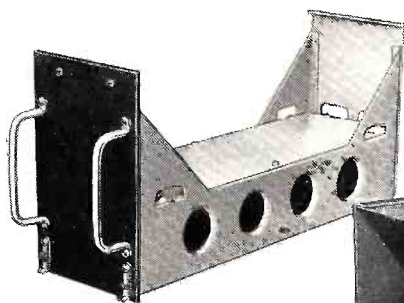
Printed with indelible vinyl ink on Natvar extruded tubing cut to specified lengths. All combinations of letters, numbers, and symbols available for identification of circuits, terminals, airplane electrical systems, etc. Wide color range for coding.

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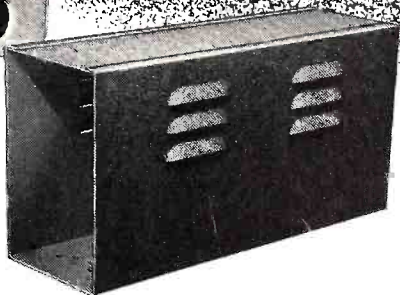
In addition to Natvar standard products, there are many Natvar products developed for a special application. These materials, now in limited production, are available on special orders.

Where specifications call for materials with special mechanical or electrical characteristics, check with our representative in your area, or directly with us. If the materials you are looking for are not already in production, our engineers will be glad to work with your engineers to provide a practical answer.

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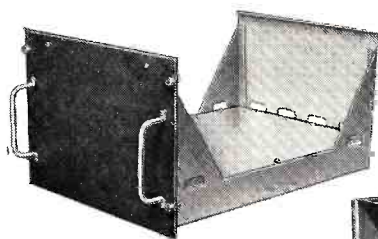


Complete range of standard chassis and Dust Covers to JAN C-172A

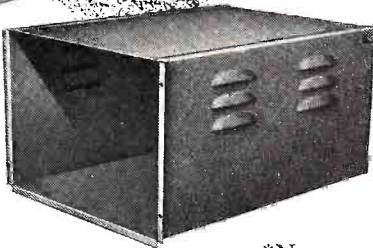


JAN C-172A

Special units furnished to your specifications



Cases (pressurized and non-pressurized)* for electronic rack systems in aircraft — MIL C-7452, also



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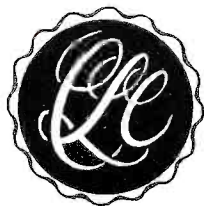
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Churchill manufactures a complete line of CUSTOM-BUILT commercial communications apparatus, including cabinet and transmitter racks, panel and relay racks, rack panels, blank steel and aluminum chassis bases, etc.

Cabinets are similar in design to those of standard specifications, but are custom-built to meet the special size requirements of your particular needs.



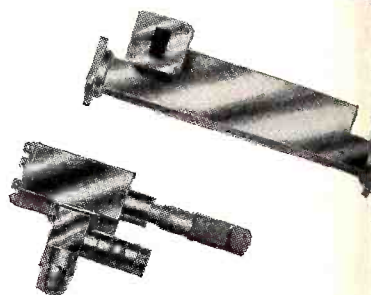
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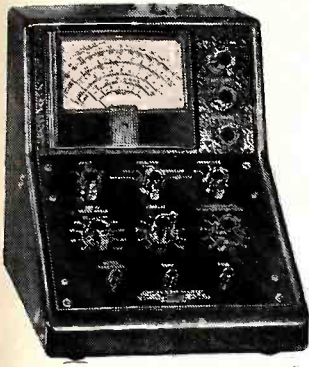
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Complex Plane Analyser

Type 250A

Plot the Poles and zeros of your system on the complex frequency plane and gather the following design information.

The Complex Plane Analyser solves magnitude and phase angle responses for any sinusoidal frequency. Exponential and complex driving functions determined. Complete transient response for impulse, step and other inputs. Root locus plotting simplifies solution of closed-loop systems. Multiplies and divides complex vectors giving magnitude and angle of the product vector. A compact, system design instrument.



Impedance Measurement Audio Frequency

Z-Angle Meter Type 310 A

30 to 20,000 c.p.s.

Measures impedance directly in polar coordinates as an impedance magnitude in ohms and phase angle, in degrees $Z/\pm\theta$. 310-A measures, with equal ease, pure resistance, inductance, capacitance or complex impedances comprised of most any RLC combinations. Range: Impedance (Z), 0.5 to 100,000 ohms; Phase Angle (θ), $+90^\circ$ (X_L) through 0° (R) to -90° (X_C). Accuracy: Within $\pm 1\%$ for impedance and $\pm 2^\circ$ for phase angle. Price: \$470.00.



Phase Measurement

Phase Meter Type 320 AB

Frequency Range 20 cycles to 100 kc.

All electronic instrument that directly measures phase angle between two periodic voltages from zero to 360° . Readings made directly without balancing on four scale ranges, 0 to 36° , 0 to 90° , 0 to 180° , and 0 to 360° . Voltage Range: 1 to 170 volts peak; Terminals for recorder; Relay Rack mounted or cabinet; Absolute accuracy: 1% of full scale plus 3%; Incremental accuracy better than 1%.

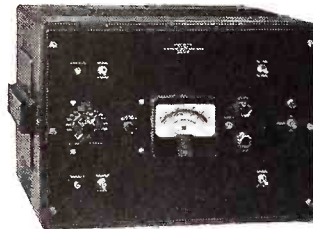
Price: with Cabinet \$565.00



Precision Phase Meter Type 322A

is an ultra-high precision phase measuring instrument which utilizes the same principles of phase measurement as the Type 320AB Phase Meter.

More elaborate circuit design techniques permit phase angles to be read with an accuracy of $\pm 1'$ from 0 to 360° without ambiguity over the frequency range from 20 cycles to 20 kilocycles. Useful frequency range extends up to 1 megacycle. Precision of phase angle reading obtained is within $\pm 1^\circ$ so that changes in the relative phase angle between two voltages can be read with an accuracy of $\pm 0.1^\circ$. Instrument measures phase angle difference between positive going zero axis crossings independent of wave form. Input impedance is approximately 4.7 megohms shunted by 13 μf . Recorder terminals are provided.



Primary Phase Standard — Type 7000 A

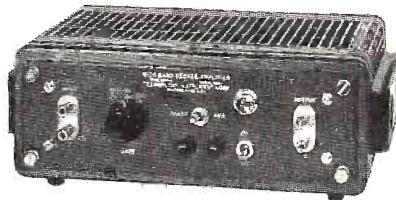
Provides two voltages of the same frequency whose relative phase angle is precisely known and continuously variable from 0 to 360° . Frequency: Available for operation at any one fixed frequency from 60 cycles to 20 kcs. Accuracy: $\pm .05$ degrees; with special operating techniques $\pm .01$ degrees.



Wide Band Amplifier Type 500-A

Designed for use as a general purpose laboratory amplifier and also with the phase meter at voltage levels below one volt. Features high gain, negligible phase shift and wide band width.

Outstanding specifications: Amplification—10; 100; 1000 selected by rotary switch . . . Accuracy $\pm 2\%$ nominal . . . Frequency response— $\pm 0.5\text{db}$ from 5 cycles to 2mc on gain of 10; $\pm 0.5\text{db}$ from 5 cycles to 1.5 mc on gain of 100; $\pm 0.8\text{db}$ from 5 cycles to 1mc on gain of 1000 . . . Phase shift $\pm 2^\circ$ from 20 cycles through 100kc . . . Gain stability—constant with line voltages (105-115v). Input impedance—160 megohms shunted by 7 μf . Output impedance—approximately 200 Ω (from cathode follower). Price: with Cabinet \$205.00; with Relay Rack \$200.00



Ponogometer Type 394 A



A precision potentiometer noise tester designed for laboratory and production quality control in the manufacture of single or multi-turn precision potentiometers. Monitoring the transient contact noise resistance appearing between the wiper and resistance element, both audible and visual indications are given when threshold level is exceeded.

Range: Equivalent Noise Resistance threshold level adjustable from 10 to 5000 ohms. Lower levels can be set up by means of accessory amplifiers.

Wiper Exciting Current: Constant 1 milliamperes. For other values accessory current sources can be set up. Price \$350.00.



Power Oscillator — Type 410 A — 100 kc to 10 mc.

(Special models 46.5 kc to 4.65 mc available.)

Power oscillator for use as bridge driver and general laboratory measurements. Features: High stability, high output (approximate 30 volts), 50-60 Ω output impedance, expanded frequency scale, direct reading output meter, compact design. Price: \$385.00.

Technical Catalog—yours for the asking. Contains detailed information on all TIC Instruments, Potentiometers and other equipment. Get your copy without obligation — write today. For TIC Precision Potentiometers see page 97.

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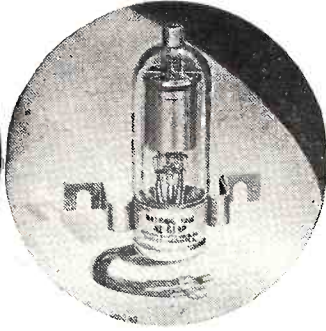
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NL-618P RECTIFIER



NL-5552 IGNITRON

IGNITRONS

Type Number	Supply Volts	MAXIMUM RATINGS			
		Maximum Demand	Corresponding Current DC-Amps.	Maximum Current DC-Amps.	Corresponding Demand
NL-1001	250-600 AC	150 Kva	4.9	9.0	50 Kva
NL-1005	250-600 AC	600 Kva	30.2	56	200 Kva
NL-5551	250-600 AC	600 Kva	30.2	56	200 Kva
NL-5552	250-600 AC	1200 Kva	75.6	140	400 Kva
NL-5822	1500 peak	1200 peak amps.	16.0	56	336 peak amps.

THYRATRONS

Type Number	Gas Filling	DC Output Amperes	Peak Amps. Rating	Peak Inverse Voltage	Filament Volts	Filament Amperes
NL-3C23	Arg. & Merc.	1.5	6	1250	2.5	7
NL-710/6011	Arg. & Merc.	2.5	30	1250	2.5	9
NL-714	Arg. & Merc.	1	3	1250	2.5	5
NL-715/5557	Mercury	1	3	5000	2.5	5
NL-740	Arg. & Merc.	4	50	1250	2.5	16
NL-741	Mercury	4	50	5000	2.5	16
NL-760	Arg. & Merc.	6.4	77	1250	2.5	21

HALF-WAVE RECTIFIERS

NL-249C	Mercury	.64	2.5	7500	2.5	7.5
NL-615	Mercury	2.5	10	2000	2.5	7
NL-617	Mercury	5	20	1000	2	12
NL-618	Xenon	6.4	40	750	2.5	18
NL-623	Mercury	15	45	500	2.5	20
NL-627	Mercury	20	120	1000	2.5	26
NL-649/5834/249R	Mercury	2	10	900	2.5	7

FULL-WAVE RECTIFIERS

NL-600	Arg. & Merc.	1	4	900	2.5	6
NL-604	Arg. & Merc.	2.5	10	900	2.5	12
NL-606	Arg. & Merc.	6.4	25.6	900	2.5	17

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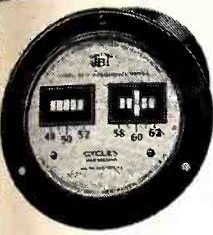
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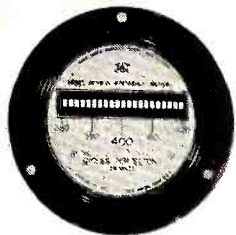
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**BUYERS'
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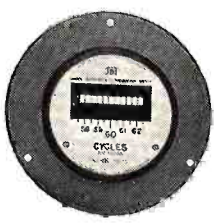
REED FREQUENCY METERS • ELAPSED TIME METERS
SWITCHES, Instrument and Test Equipment Quality: ROTARY, LEVER, TOGGLE
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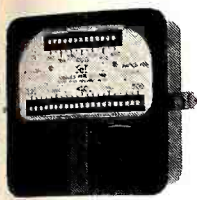
Model 30-F
 Full Range, Double Window



Model 36-FX-21
 21-Reed Meter in 3 1/2" Case



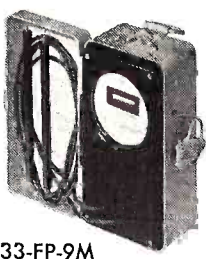
Model 34-FHXX
 9-Reed in 3 1/2" Sealed Case



Model 41-FX
 Dual Range in 4" Case



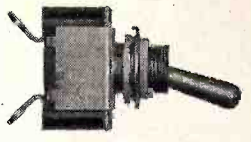
Model 15-FHAC
 5-Reed in 1 1/2" Sealed Case



Model 33-FP-9M
 Portable, Metal Case
 TS-328 A/U (400 cy. type) Shown

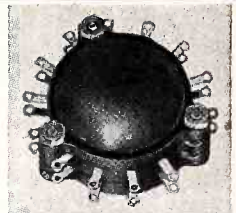
NEW TOGGLE SWITCHES

J-B-T announces the manufacture of toggle switches of the quality required by Specification JAN-S-23. The most popular types, corresponding to Series ST-40, ST-42, ST-50 and ST-52, are tooled. Your inquiries are welcomed.



MOLDED ROTARY SWITCHES

Fully Enclosed Single and Multi-Gang Shorting and Non-Shorting 14 and 20 Positions 1 to 6 Decks (Model MS-14-2 Illustrated)



- All moving contacts enclosed—eliminates dirt and corrosion.
- Contact lugs permanently integrated into switch assembly.
- Sturdy construction with 3-post deck suspension, double-grip collector arms, and rectangular drive shaft through decks for precision indexing.
- Interchangeable, electrically and mechanically with J-B-T Series SS-14 and 20 position Laminated Switches, widely used by industry and the Armed Services.

Normal carrying capacity (not make-and-break) 1 amp.; maximum momentary capacity (not make-and-break) 5 amp.; maximum voltage between contacts and ground, 1000 volts R.M.S.; between decks and ground, 2000 volts R.M.S. Average contact resistance 0.007 ohms or less. Also available in 6-pole or 12-pole double throw construction.

LAMINATED ROTARY SWITCHES

(Model SS-14-2 Illustrated)



Used widely in quality test equipment, portable instruments, inspection setups and avionics where trouble-free, dependable performance is of major importance. Available in two basic types—14 and 20 position—the design gives extra contacts in minimum space. One to six decks.

LEVER ACTION SWITCHES

(Model SS-14-1L4 illustrated)



Excellent for test equipment and communications systems, these switches use the same high quality parts as the SS-14 series. Bracket mounting holes 1 5/8" apart; single deck types may be mounted in groups 3/4" between centers; two-deck types, 1 1/16" between centers.

DISTRIBUTOR SERVICE

Standard J-B-T items are available through authorized electronics parts distributors.

ASK FOR CATALOG 652

PORTABLE REED FREQUENCY METERS

Meters illustrated are typical panel mount—portable—for use where constant or accurate frequency is important to efficient operation of equipment.

Permanently Accurate within $\pm 0.3\%$ or better at reference temperature, depending on the model. This accuracy is not affected by poor wave form, external magnetic disturbances, or voltage fluctuations.

Design and Type for Every Service. Made in a wide variety of portable and panel case styles, reed groupings and frequency ranges from 12 to 525 cycles and above; 100-130 volts furnished unless otherwise specified. Rugged Construction of simplified, patented design, with no moving parts to wear out or require out of calibration. Ideal for field and mobile applications.

Portable for Electronic Circuits because of relatively low power consumption and J-B-T meters with high Q and sharp, immediate response.

3 1/2" SEALED Types

Meters sealed, glass-to-metal construction solder terminals, meet or exceed the standard electrical requirements of JAN-I-6 and MIL-6A including the 3000 volt breakdown. Use the front mounting dimensions specified. Max. barrel diameter, 2 1/16"; 2 7/8" overall behind flange. While not regularly produced, these meters are in volume production.

1 1/2" SEALED Types

Model 15-FHAC (illustrated half actual size). Read 400 cycles, 2 reeds, 8-10 volts, for use as follower circuit. Widely used on audio meters to standardize output. Meets intent of MIL-6 and amendments on sealed meters. Max. barrel diameter, 1 1/2" diameter; detachable flange, 1 1/2" diameter; solder terminals.

Model 15-FH Series (not illustrated)—Same case, read, 5 reeds, 58-62 cycles, 100-130 volts. Variations such as 6 reeds, 25 or 400 cycle ranges and higher voltages available on special order.

ELAPSED TIME METERS

For Maintenance, Tube Life Data, and Operating Time Records—on Motor Generators, Transmitters, Receivers, Rectifiers, Test Set-ups, etc.



Model 31-EX (illustrated) also known as running-time or total time meter, registers in 1/10 hours to 9,999.9 hours, then automatically resets. Normally stocked for 60 cycles, 110-130 volts. 3 1/2" standard meter mounting. Variations such as 50 cycles; 230 volts; 0-99,999 hours; and 3" rectangular case available on special order.

SEALED TIME METERS

Model 31-EHXX—Completely sealed meter, reading 0-9,999.9 hours, same as Model 31-EX above. Glass-to-metal construction, solder terminals, and 3 1/2" detachable flange, all match XX metal frequency meter case.

Model 33-EHXX—Newest of the J-B-T elapsed time meters is this unit operating on 400 cycles, 110-125 volts, to read 0-9,999.9 hours in 1/10 hour steps. It is presently made only in 3 1/2" flange sealed metal case, 2 3/4" diameter, 4" deep behind panel.

FREQUENCY—TIME METERS

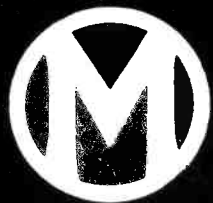
Combination Reed-Frequency—Elapsed Time Meters—One Meter Does The Work of Two



Model 31-FE (illustrated) pioneered by J-B-T, saves panel space and cost, and encourages periodic maintenance. 3 1/4" flange, metal case, 4 1/32" overall depth, standard. 3 1/2" case known as 31-FEX-1 supplied on custom orders. 5 reeds, 60 cycle range, standard; 7, 9, 11 reeds or 50 cycle range on special order.

ASK FOR CATALOG 652

J-B-T INSTRUMENTS, INC. NEW HAVEN 8, CONN.



Molded Tube Sockets

for High Production Applications



Recent addition to METHODE line of TUBE SOCKET ACCESSORIES is this new "Twist-On" type of tube shield and base, mounted in combination with molded sockets, as illustrated. Projecting lugs on shields provide direct ground to chassis under screw pressure and a reliable shock and vibration proof mount.

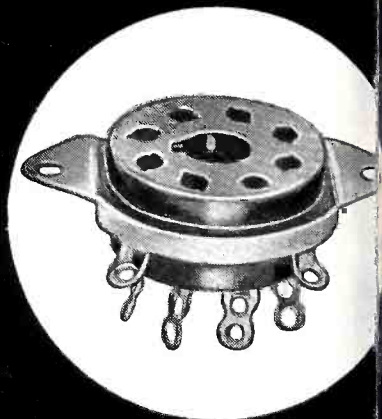
Other METHODE PRODUCTS include:

- Laminated wafer tube sockets
- Military tube and crystal sockets
- Panel Connectors
- Printed circuit sockets
- Tube shields

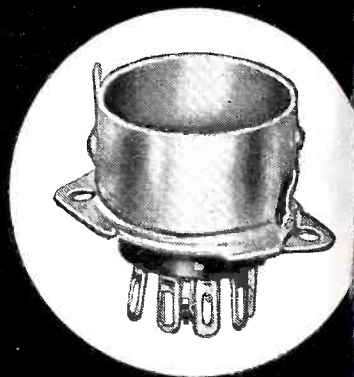
METHODE Manufacturing Corp.

2021 West Churchill Street • Chicago 47, Illinois

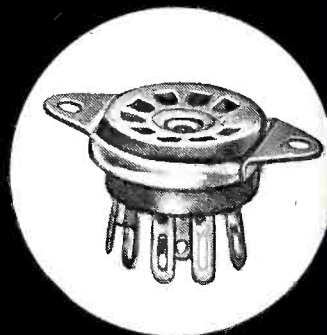
Geared to produce Plastic and Metal Electronic Components



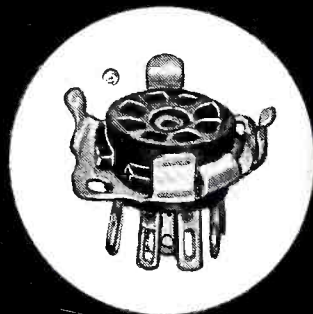
Top and Sub-mount Octal Sockets, G. P. or Mica Phenolic, 1 5/16" or 1 1/2" mounting centers.



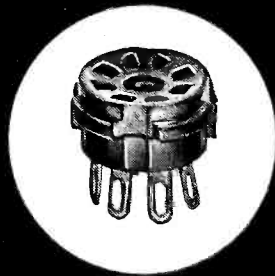
"J Lock" Type Miniature and Noval Socket and Shield Base Combination, G. P., Mica Phenolic or Ceramic Insulators.



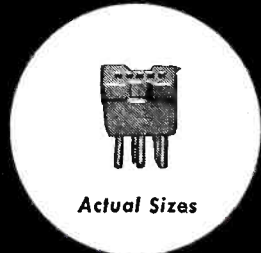
Top and Sub-mount Miniature and Noval Sockets, G. P., Mica Phenolic, Ceramic Insulators.



"Snap-in" Type Miniature and Noval Sockets and Shield Base Combination, G. P. or Mica Phenolic.



Miniature "Crimp-in" Sockets, G. P. Phenolic, with and without center shield.



Subminiature Tube Sockets, 4, 5, 6, 7 and 8 pin sizes, Mica Phenolic.

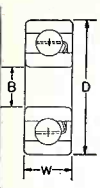
Actual Sizes

We invite your inquiries

Specify *Micro* Precision Instrument

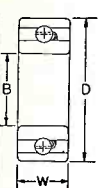
RADIAL TYPES

Ball Bearings



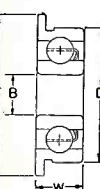
Retainer

BEARING	B	D	W
R0	3/64-.0469	5/32-.1562	1/16-.0625
R1	.0550	3/16-.1875	5/64-.0781
R1-4	5/64-.0781	1/4-.2500	3/32-.0937
R1-5	3/32-.0937	5/16-.3125	7/64-.1094
R2-5	1/8-.1250	5/16-.3125	7/64-.1094
R2	1/8-.1250	3/8-.3750	5/32-.1562



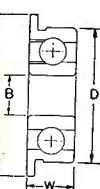
Retainer Extra Light

R133	3/32-.0937	3/16-.1875	1/16-.0625
R144	1/8-.1250	1/4-.2500	3/32-.0937
R155	5/32-.1562	5/16-.3125	7/64-.1094
R156	3/16-.1875	5/16-.3125	7/64-.1094
R166	3/16-.1875	3/8-.3750	1/8-.1250
R168	1/4-.2500	3/8-.3750	1/8-.1250
R188	1/4-.2500	1/2-.5000	1/8-.1250
R613M	6mm.	13mm.	3.5mm.



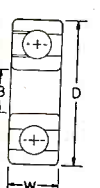
Flanged Retainer

FR1	.0550	3/16-.1875	5/64-.0781
FR1-4	5/64-.0781	1/4-.2500	3/32-.0937
FR1-5	3/32-.0937	5/16-.3125	7/64-.1094
FR2-5	1/8-.1250	5/16-.3125	7/64-.1094
FR155	5/32-.1562	5/16-.3125	7/64-.1094
FR156	3/16-.1875	5/16-.3125	7/64-.1094
FR166	3/16-.1875	3/8-.3750	1/8-.1250
FR188	1/4-.2500	1/2-.5000	1/8-.1250



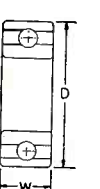
Flanged Full

F13	.0550	3/16-.1875	5/64-.0781
F14	5/64-.0781	1/4-.2500	3/32-.0937
F15	3/32-.0937	5/16-.3125	7/64-.1094
F154	1/8-.1250	5/16-.3125	7/64-.1094
F155	5/32-.1562	5/16-.3125	7/64-.1094
F156	3/16-.1875	5/16-.3125	7/64-.1094



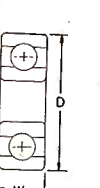
Full

10	.0250	.1000	1/32-.0312
12	.0400	1/8-.1250	3/64-.0469
12½	3/64-.0469	5/32-.1562	1/16-.0625
13	.0550	3/16-.1875	5/64-.0781
14	5/64-.0781	1/4-.2500	3/32-.0937
15	3/32-.0937	5/16-.3125	7/64-.1094
16	1/8-.1250	3/8-.3750	5/32-.1562



Full Extra Light

144	1/8-.1250	1/4-.2500	3/32-.0937
154	1/8-.1250	5/16-.3125	7/64-.1094
155	5/32-.1562	5/16-.3125	7/64-.1094
156	3/16-.1875	5/16-.3125	7/64-.1094
157	7/32-.2187	5/16-.3125	7/64-.1094
168	1/4-.2500	3/8-.3750	1/8-.1250
1810	5/16-.3125	1/2-.5000	5/32-.1562



Spring Retainer

R1-4Z	5/64-.0781	1/4-.2500	3/32-.0937
R1-5Z	3/32-.0937	5/16-.3125	7/64-.1094
R2-5Z	1/8-.1250	5/16-.3125	7/64-.1094
R2Z	1/8-.1250	3/8-.3750	5/32-.1562
R155Z	5/32-.1562	5/16-.3125	7/64-.1094
R156Z	3/16-.1875	5/16-.3125	7/64-.1094
R166Z	3/16-.1875	3/8-.3750	1/8-.1250
R168Z	1/4-.2500	3/8-.3750	1/8-.1250

MICRO makes, and makes possible

• • • NEW PRODUCTS

► By SIZE, TYPE, and MATERIAL • MICRO provides the widest selection of small ball bearings made to precision quality.

► DIMENSIONS of complete assemblies range from 1/2" overall diameter down to .1000".

Seven RADIAL and three other series are standard in chrome and stainless steels with some available in beryllium copper. SPECIAL SIZES and MATERIALS are also considered.

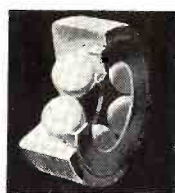
► TOLERANCES are ABEC5 or BETTER.

NEW • • •

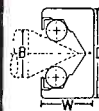
► The MICRO RETAINER (R) bearings, first developed by NHBB in the U. S., are a significant improvement for sizes previously available only in the full type. The retainer produces smoother running and lower friction. The crown retainer has long been in use, and many sizes are also being equipped with the new ribbon type — a two-piece cylindrical-pocket, cone-controlled and balanced retainer.



OTHER TYPES



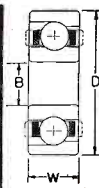
Pivot



BEARING	B	D	W
22½M	.040	4mm.	2.4mm.
23M	.050	5mm.	3.2mm.
24	.085	1/4-.2500	1/8-.1250
24H	.085	1/4-.2500	1/8-.1250
26	.165	3/8-.3750	3/16-.1875
26H	.165	3/8-.3750	3/16-.1875



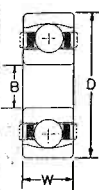
Angular Contact



113	.0550	3/16-.1875	5/64-.0781
114	5/64-.0781	1/4-.2500	3/32-.0937
115	3/32-.0937	5/16-.3125	7/64-.1094
1154	1/8-.1250	5/16-.3125	7/64-.1094
116	1/8-.1250	3/8-.3750	5/32-.1562



Self Aligning



214	5/64-.0781	1/4-.2500	3/32-.0937
215	3/32-.0937	5/16-.3125	7/64-.1094
2154	1/8-.1250	5/16-.3125	7/64-.1094
216	1/8-.1250	3/8-.3750	5/32-.1562

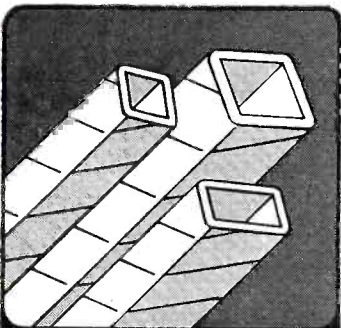
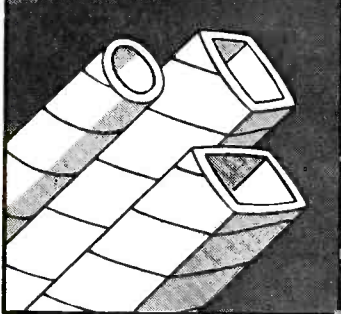
New Hampshire **MICRO** Ball Bearings, Inc.

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1 MICRO CIRCLE

PETERBOROUGH, N. H.

EXACTLY your type and size in Spiral Wound PAPER TUBES



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LETTERHEAD FOR
STOCK ARBOR LIST
OF OVER 2000 SIZES

SQUARE, RECTANGULAR, ROUND

Standard-type PARAMOUNT paper tubes used for millions of coil forms and other applications. Hi-Dielectric. Hi-Strength. Kraft, Fish Paper, Red Rope, Acetate, or any combination wound on automatic machines. Any size from 1/2" to 30" long, from .450" to 25" I.P. Produced from wide range of stock arbors or specially engineered for you.

NEW "PARAFORMED" TUBES SQUARE OR RECTANGULAR

Entirely new technique in tube making developed and perfected by PARAMOUNT. Perfectly flat side walls, sharp square inside corners, and very small radius on the four outside corners. Spiral wound, not die formed. No sharp outside edges to cut wire. No need for wedges to tighten winding on laminated core. Full rigidity and physical strength. Permits winding coils to closer tolerances. Allows faster automatic stacking of coils. Approved and used by leading manufacturers. *No extra cost!*

PARAMOUNT PAPER TUBE CORP.

616 LAFAYETTE ST., FORT WAYNE, IND.

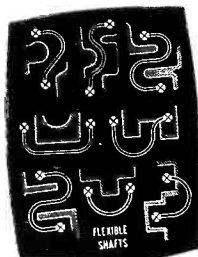
Standard of the Coil Winding Industry for Over 20 Years



For
Simple more logical grouping of winding units to insure quiet, smooth, trouble-free operation.

For
More economical construction and lower maintenance cost.

For
A more direct alignment in remote control or power transmission around corners.



Write on your letterhead for "Flexible Shaft Assemblies"

F.W. STEWART MFG. CO.

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- LINEAR PHASE CHARACTERISTIC.
- FAST RISE TIME.
- AVAILABLE IN BULK OR PRE-CALIBRATED SEALED UNITS.
- LIGHTWEIGHT AND FLEXIBLE.

CHARACTERISTICS

	HH-1500	HH-2000	HH-2500
Delay (μ sec/ft)	0.075	0.110	0.61
Impedance (ohms)	1600	2200	2400
Attenuation (db/ μ sec)	1 mc	1.0	0.2
	4 mc	2.3	0.5
	10 mc	7.0	1.7
Cable O.D.	0.405	0.405	0.25

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PHAZOR NULL METER
Pat. Pend. MODEL 100A



22950 F.O.B. New York, N. Y.

A phase sensitive null detector wherein noise and harmonic voltages are effectively eliminated.

- For use in conjunction with bridge and potentiometer circuits.
- Simplified and precise zeroing of synchro devices.
- Allows separate adjustment of phase and magnitude in null circuits.
- Eliminates the necessity for filters.

SPECIFICATIONS

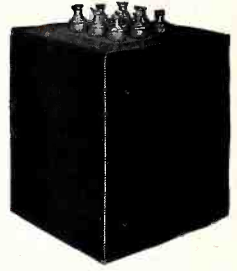
Input Impedance
High Gain... 2 megohms shunted by 30 mmfd.
Low Gain... 2.5 megohms shunted by 15 mmfd.
Sensitivity... 6 millivolts off-scale deflection
Frequency Range... 30-10,000 cps (higher ranges available)
Selectivity... 40 db. down on all noise & harmonics
Reference Input Power... 10 milliwatts
Maximum Input Voltage... 125 volts RMS
Peak Input Voltage... 400 volts
Power Supply... 105-125 volts, 60 cps, 25 watts
Dimensions—Hgt. 9 in., Width 15 in., Depth 8 in.
Weight... 25 pounds

INDUSTRIAL TEST EQUIPMENT CO.
EAST 11th ST., N. Y. 3 - Tel: GR. 3-4684

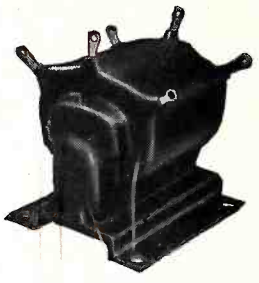
MINIATURIZATION
Thru constant research, Acme transformer engineers have developed designs, that save pounds and ounces in weight and provide long-life performance. We build miniature transformers by the thousands, each individually performance tested.



PRESSURIZED SEAL
Here is a transformer design with terminals sealed under pressure with a resilient sleeve that accommodates expansion and contraction of temperature changes.



PLASTIC COATING
This is one of a number of ways that plastic has been adapted to seal transformers or individual coils for service in humid atmospheres or under conditions which breed fungi.



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31BG WATER STREET • CUBA, NEW YORK
IN CANADA: ACME ELECTRIC CORPORATION LTD.
50 NORTH LINE ROAD • TORONTO, CANADA

a plus feature

Immediately following the
Product Listings in the
DIRECTORY SECTION

of this Issue
is a list of more than

2500

TRADE NAMES

of electronic and
allied products.

They are intended for
your use in determining
the manufacturer's name
when only

a trade name is known.

Thor

leading users of
STEATITE
bobbins
SPECIFY
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Steatite Bobbins are only one of the scores of standard and custom-made steatite products we manufacture to Jan-I-10 or Commercial Specifications.
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Thor Ceramics, Inc.
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Hitemp

Teflon* magnet wire

Teflon alloy and plated wire

Quantity production: sizes 14-50 AWG

Class H Insulation -75C to +250C

High Dielectric - Excellent Power Factor

Resistant to moisture and chemicals

"Essential to Miniaturization"

*Dupont's trade name for Polytetrafluoroethylene

Hitemp Wires Inc.

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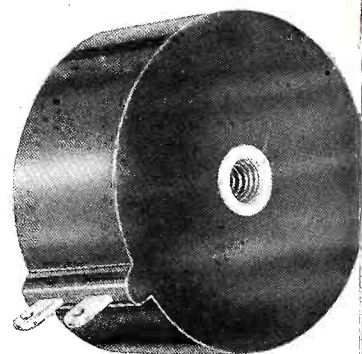
Pave Rand

NEW!

AN
EXCLUSIVE

C-A-C

DEVELOPMENT



**COMPRESSION
MOLDED**
Plastic Toroid

*Meet JAN temperature and humidity requirements

We consider this development revolutionary as the development of the molded mica capacitor. The bothersome mounting problems and fragility of the uncased toroid have been entirely eliminated. Complete uniformity of dimensions are maintained by precision molds. To keep mounting pressure off the plastic bushing of brass is molded into center. Type "A" provides a center hole to clear a 6-32 screw. Type "B" is threaded for a 6-32 screw. Taping is complete for molding any of the .90 x .40 coils. The complete unit is compact, measuring only 1/2" by 1/2" thick.

Complete data available on request; samples will be furnished for your evaluation.

**COMMUNICATION
ACCESSORIES**

Company

HICKMAN MILLS, MISSOURI

YOUR PROBLEMS ARE

C-A-C PROBLEMS

Hardly a day passes but what we receive interesting research problems on the application of toroids.

CAC engineers welcome the opportunity to consider your specific requirements in frequency selective networks — For your convenience use our specification list (below) which covers most filter requirements:

FILTER SPECIFICATIONS

- Pass Band
 - Frequency limits: _____ to _____
 - Max. insertion loss at min. point: _____ db
 - Required flatness: \pm _____ db
- Attenuation Band
 - Frequency limits & relative attenuation required:
 - _____ to _____; _____ db
 - _____ to _____; _____ db
 etc
- Terminations *
 - Input
 - impedance in pass band: _____ ohms
 - impedance beyond pass band: increase decrease
 not important
 - balanced, unbalanced
 - Output
 - impedance in pass band: _____ ohms
 - impedance beyond pass band: increase decrease
 not important
 - balanced, unbalanced
- Operating Conditions
 - Power level _____ DBM
 - Temperature range _____ ° to _____ ° F or C
 - Vibration requirements _____
- Case Requirements
 - Max. dimension: _____ in. x _____ in. x _____ in.
 - Mounting by No. _____ - _____ (thread) x _____ in. studs
 tapped inserts.
 - Location of terminals and mounting provisions:
on _____ in. x _____ in. surface.
 - Hermetic Seal: yes no.
 - Finish Color: dark gray light gray black Special (Specify)
- Other Requirements
 - Military specifications applicable: MIL-T-27 _____
 none
 - Special Requirements: _____

*NOTE: If low frequency limit of pass band is d.c., input and output impedances are usually equal and must both be either balanced or unbalanced.

TOROIDAL INDUCTORS Data For Standard Types

Type	Normal Lmax.	Appr. O.D. x H	Size Useful Freq. Range	Qmax @ Freq.	lac- T.C. ma
206	3.0 Hy	.90x .40	Up to 15 KC	140 @ 9 KC	1 23
930	17.5 Hy	1.20x .60	Up to 15 KC	170 @ 7.5 KC	1 42
254	35 Hy	1.85x .85	Up to 15 KC	220 @ 5 KC	1 67
466	60 Hy	2.15x 1.00	Up to 15 KC	260 @ 5 KC	3 95
848	1.4 Hy	.90x .40	10- 50 KC	170 @ 20 KC	1 33
395	8.0 Hy	1.20x .60	10- 50 KC	220 @ 20 KC	1 61
381	17.0 Hy	1.55x .65	10- 50 KC	250 @ 17.5 KC	3 71
608	600 Mh	.90x .40	30- 75 KC	165 @ 60 KC	3 50
579	7.5 Hy	1.55x .65	30- 75 KC	185 @ 30 KC	2 110
041	320 Mh	.90x .40	50-200 KC	115 @ 120 KC	3 68
013	4.0 Hy	1.55x .65	50-200 KC	145 @ 70 KC	3 150

REMARKS

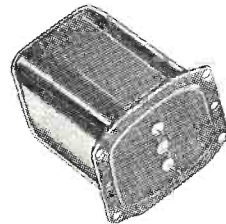
Qmax—Values taken at approx. .01 lac. Q decreases with increasing current to about .50 Qmax at 1.0 lac—higher inductance values have lower Qmax at lower frequency due to dielectric losses of winding distributed capacity. All values are for inductors wound with Heavy Formex wire.

T.C.—Temperature characteristics as follows:

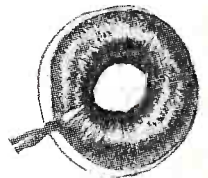
- approx. 100 ppm/°F
- \pm .1% 55 to 90°F
- \pm .1% 30 to 130°F

(most types with temp. characteristic 1 are available with characteristic 3 at no sacrifice in performance)

lac—r.m.s. current which raises 0.1 Hy inductor to max. (2% above initial) inductance — (1% increase occurs at approx 0.35 lac.

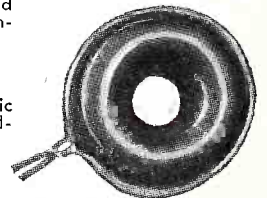


Custom miniaturization of filters is achieved through use of miniaturized components and advanced design techniques.



Uncased coils adjusted to your specifications.

Moistureproof Plastic Coated Toroids available in all types.



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Company

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Via C.A.C. Beechcraft, we are only hours away from you—we solicit the invitation to discuss your problems across your own desk.

WHITNEY BLAKE

CORD and CABLE

FOR POWER SUPPLY
AND ELECTRONIC
APPLICATIONS

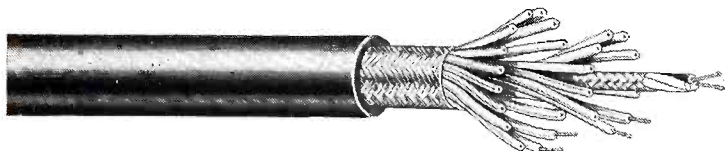


FEATURE ADVANCED DESIGN
PROVIDE LONG
DEPENDABLE SERVICE

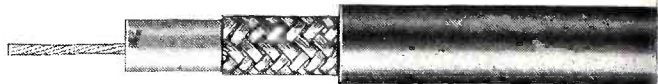
Over a half-century of experience in the wire industry . . . a development laboratory constantly searching for improved materials, better constructions . . . the finest equipment for extruding rubber, neoprene, polyvinyl chloride, polyethylene, nylon, and other insulating materials . . . highly skilled workers

. . . a rigid quality control system . . . all combine to assure you that Whitney Blake cord and cable are the best available.

We are prepared to help solve your cord and cord set engineering problems as well as to furnish a wide variety of products under the following general classifications.



MULTICONDUCTOR COMMUNICATIONS CABLES
in a wide range of conductor sizes. Shielded or unshielded, multiconductor or multipair types with a choice of insulating and jacketing materials.



COAXIAL AND TWINAX CABLES
for high frequency applications.
Army-Navy approved RG types.



MICROPHONE CABLES with neoprene jackets.



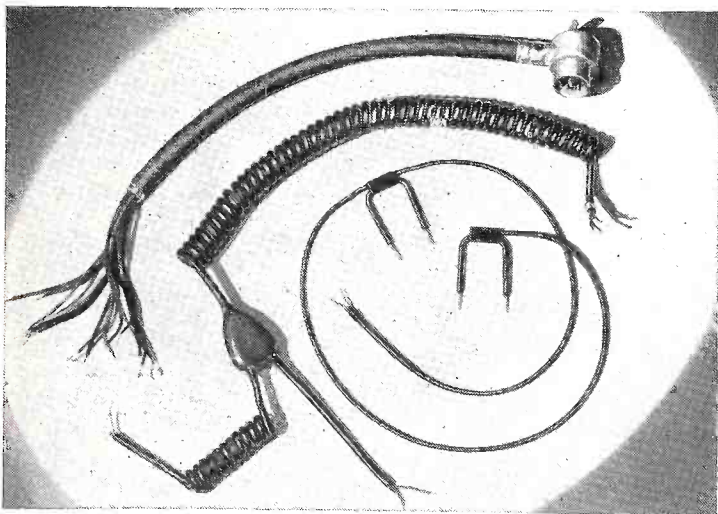
SOUND SYSTEM WIRES
with rubber, Plastite® or textile insulation.



Flexible Cords

DYNAPRENE® neoprene jacketed cord and rubber jacketed cord for power supply. Listed by Underwriters' Laboratories.

CORD SETS custom built to your specific requirements. Using either standard cordage or cord designed to fit your particular application, Whitney Blake can fabricate regular line cords or special purpose cords having attached or integrally molded rubber or Plastite fittings.



Coiled Kords

Retractable cords for power supply or communication uses. Standard Underwriters' types and special shielded multiple conductor types including nine conductor cable. (Manufactured by Whitney Blake Company and sold through Coiled Kords, Inc.)

Contact our representative in your area for additional information and help with your wiring problems.

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TWX:CG 1708

CLEVELAND 16, OHIO
19115 Detroit Road
Telephone: Edison 1-7737

KANSAS CITY, MISSOURI
213 W. 75th Street
Telephone: Emerson 4900

LOS ALTOS, CALIFORNIA
(San Francisco Area)
Box 1362
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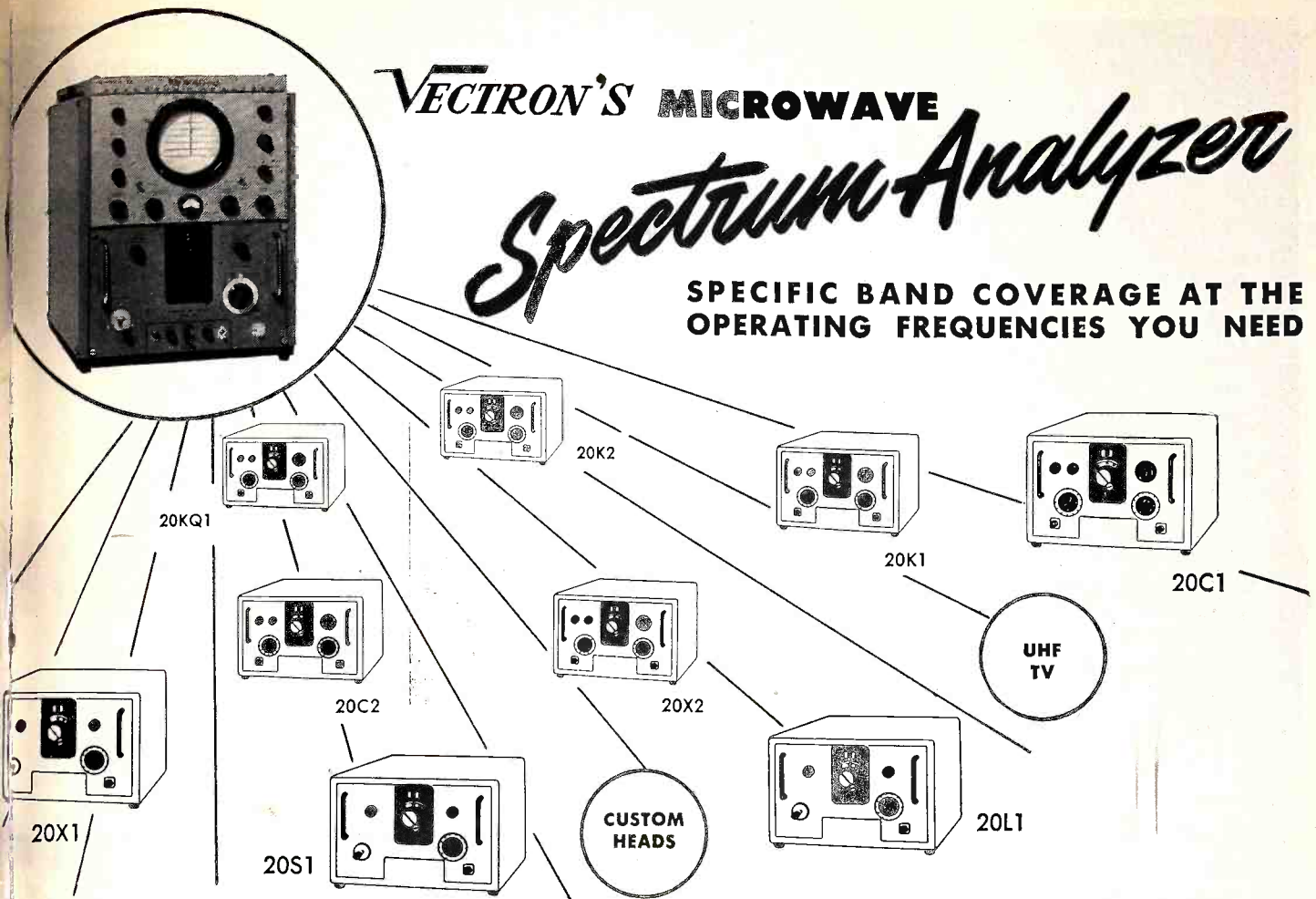
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conversion or adaptation Every Vectron R. F. Head can be placed in immediate operation, without conversion or adaptation, in the Vectron SA20 or SA20 Spectrum Analyzer Chassis

Microwave Radar and Communications Equipment The Vectron SA20 Spectrum Analyzer presents visually the frequency distribution spectrum of the power output of pulsed or CW microwave oscillators and can be used as a sensitive RF detector for checks and measurements in the design, production and maintenance of microwave radar and communications equipment and components

Vectron's New OSCILLATRON

The new self-contained; self-powered crystal controlled transistor oscillator.

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FEATURES

- Large, clear 5" oscilloscope pattern
- Standard bezel to accept camera, hood or filter
- Minimum number of controls . . . maximum operating convenience
- Double conversion assures maximum stability
- Built in regulated supply for Klystron oscillator
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- New provision for D. C. Filament supply for Klystron oscillator

SPECIFICATIONS

- Overall Gain — 130 decibels
- Sensitivity — Approx. — 60 dbm for 1 usec. pulse width
- IF Bandwidth — Choice of 50 kc, recommended for CW and 0.2 to 2 usec. pulse widths, or 20 kc, bandwidth to 5 usec
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- Power Supply 105-125 V, 60 cycles
- New low noise 70 kc IF strip for higher usable gain



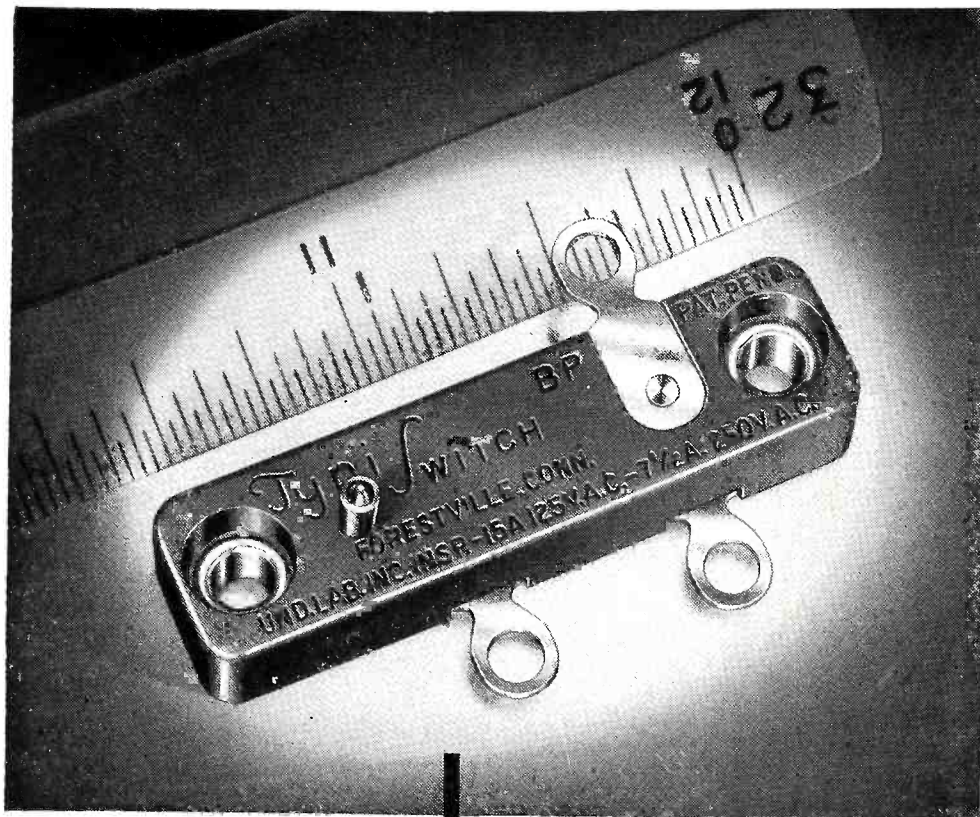
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Illustrated: Model BP. Single-pole, double throw, 15A., 125 V., A.C.

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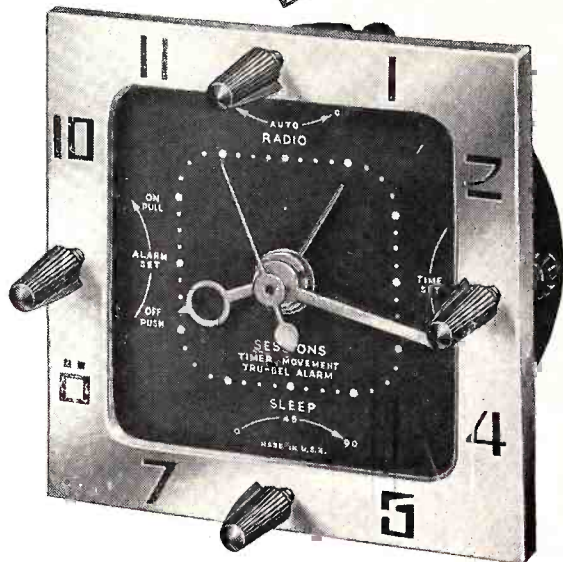
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for Broadcasting and Industry

TRANSMITTING TUBES

TYPE	CATHODE			MAXIMUM ANODE RATING				FULL INPUT FREQ. MCS.	COOLING
	VOLTS	AMPS	MU	VOLTS	AMPS	INPUT WATTS	DISS. WATTS		
ML-2C39A	6.3	1.0	100	1000	0.125	125	100	2500	Forced-Air
ML-207	22.0	51.0	20	15000	2.0	30000	10000	1.6	Water
ML-212E	14.0	6.0	16	3000	.350	—	275	1.5	Convection
ML-220C	21.5	41.0	40	15000	1.5	—	10000	4	Water
ML-220CA	21.5	41.0	40	15000	1.5	—	5000	4	Forced-Air
ML-228A	21.5	41.0	16	6000	1.5	—	5000	3	Water
ML-232B	20.0	60.0	40	20000	3.0	—	25000	3	Water
ML-240B	21.5	41.0	40	12000	1.7	—	10000	20	Water
ML-241B	14.0	6.0	16	3000	.350	—	275	7.5	Convection
ML-242C	10.0	3.25	12.5	1250	.150	188	100	6	Convection
ML-279A	10.0	21.0	10	3000	.800	—	1200	20	Convection
ML-298A	27	225	32	20000	11.0	—	100000	4	Water
ML-298B	27	225	57.5	20000	11.0	—	100000	4	Water
ML-342A	20.0	67	40	20000	2.5	—	25000	4	Water
ML-343A	21.5	57.5	40	18000	2.0	—	10000	4	Water
ML-343AA	21.5	57.5	40	18000	1.5	—	5000	4	Forced-Air
ML-356	7.5	170	20	12500	6.0	60000	22500	25	Water
ML-357B	10.0	10	30	4000	0.5	1600	400	110	Convection
ML-379A	10.0	21.0	10	3000	.800	—	1200	20	Convection
ML-381	6.3	1.0	100	3500	0.01*	35*	35*	3000	Forced-Air
ML-450TH	7.5	12.0	38	6000	0.6	—	450	40	Convection
ML-833A	10.0	10.0	35	4000	0.50	1800	400	20	Forced-Air
ML-880	12.6	315	20	10500	6.0	60000	20000	25	Water
ML-889A	11.0	120	21	8500	2.0	16000	5000	50	Water
ML-889RA	11.0	120	21	8500	2.0	16000	5000	40	Forced-Air
ML-891	22.0	60	8.5	12000	2.0	18000	6000	1.6	Water
ML-891R	22.0	60	8.5	10000	2.0	15000	4000	1.6	Forced-Air
ML-892	22.0	60	50	15000	2.0	30000	10000	1.6	Water
ML-892R	22.0	60	50	12500	2.0	18000	4000	1.6	Forced-Air
ML-893A	20.0	183	35	20000	4.0	70000	20000	5	Water
ML-893AR	20.0	183	35	20000	4.0	70000	20000	5	Forced-Air
ML-5530	5.0	55	26	5000	1.75	8750	3000	110	Forced-Air
ML-5531	6.3	92	22	10000	3.75	30000	10000	30	Forced-Air
ML-5541	7.5	57	26	8500	2.75	23000	10000	110	Forced-Air
ML-5604	11.0	176	19.5	12500	3.0	32500	10000	22.5	Forced-Air
ML-5606	22.0	60	50	15000	2.0	30000	10000	1.6	Water
ML-5619	11.0	176	19.5	12500	3.0	32500	20000	22.5	Water
ML-5658	12.0	310	20	12500	5.0	60000	20000	20	Water
ML-5666	11.0	120	21	10000	2.0	20000	12500	22.5	Water
ML-5667	11.0	120	21	10000	2.0	20000	7500	22.5	Forced-Air
ML-5668	22.0	60	50	14000	2.0	28000	20000	5	Water
ML-5669	22.0	60	50	14000	2.0	28000	10000	5	Forced-Air
ML-5681	12.0	220	25	15000	12.0	150000	75000	30	Water
ML-5682	16.5	325	32	16000	20.0	300000	100000	30	Water
ML-6256	12.6	27	21	5500	1.5	7000	5000	110	Water
ML-6257	12.6	27	21	5500	1.5	7000	5000	110	Water
ML-6258	12.6	27	21	5500	1.5	7000	3000	110	Forced-Air

*Duty cycle: 0.0033

HIGH-VOLTAGE RECTIFIERS

TYPE	CATHODE		ANODE RATINGS		INSULATION	COOLING
	VOLTS	AMPS	INV. PKV	PEAK MA		
ML-102	20	19.0	75	750	Air	Convection
ML-103	10	11.5	125	78	Oil	Convection
ML-108	13	12.5	140	200	Oil	Convection
ML-110	10	11.5	140	78	Air	Convection
ML-115	10	11.5	125	100	Air	Convection
ML-120	13	12.5	140	200	Air	Convection
ML-121	10	11.5	140	100	Oil	Convection
ML-126	13	12.5	150	200	Air	Convection
ML-170	13	12.5	200	200	Air	Convection
ML-180	13	12.5	200	200	Oil	Convection
ML-199	12	23	110	10000	Air	Convection
ML-222A	21.5	41	25	5000	Air	Water
ML-5575/100	20	24	150	1000	Air	Convection
ML-5576/200	20	32	150	2500	Air	Convection

MERCURY VAPOR RECTIFIERS

TYPE	CATHODE		TUBE VOLT. DROP	FIL. EXCIT.	COOLING	ANODE RATING		
	VOLTS	AMPS				INV. PKV	PEAK AMPS	ANODE TEMP.
ML-255B	5.0	19	15	Quad.	Forced-Air	20	20.0	50
ML-266B	5.0	42	15	Quad.	Forced-Air	20	40.0	100
ML-267B	5.0	6.75	10	Quad.	Convection	7.5	8.0	20
ML-315A	5.0	10	15	Quad.	Convection	12.5	8.0	20
ML-575A	5.0	10	10	In-Ph.	Convection	15	6.0	10
ML-673A	5.0	10	10	In-Ph.	Convection	15	6.0	10
ML-857B	5.0	30	15	Quad.	Forced-Air	22	40.0	100
ML-866A	2.5	5.0	15	In-Ph.	Convection	10	1.0	0
ML-869B	5.0	19	15	Quad.	Forced-Air	15	20.0	50
ML-872A	5.0	7.5	10	In-Ph.	Convection	10	5.0	10
ML-8008	5.0	7.5	10	In-Ph.	Convection	10	5.0	10

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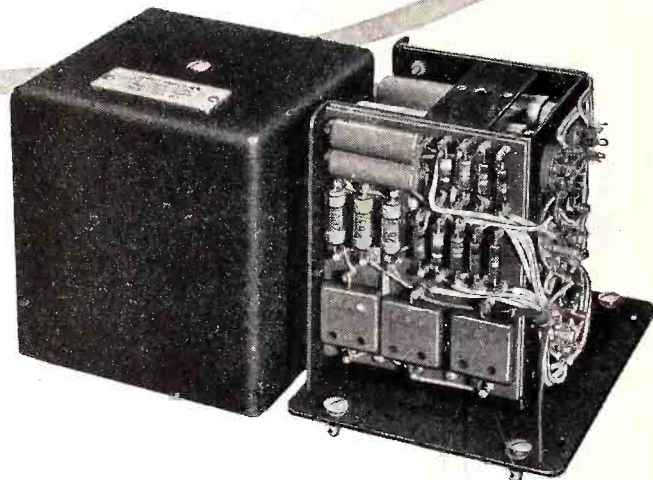
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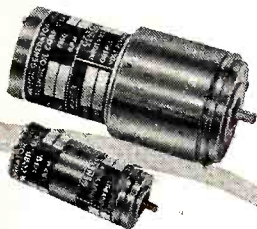
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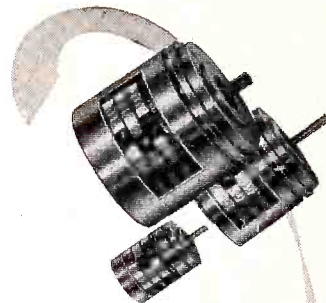
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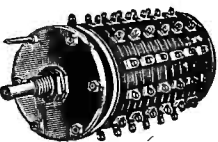
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Non-snap action. Momentary contact, single pole, single throw type. Designed for manual actuation only. Single hole panel mounting. Bushing (15/32"—32 thread) and hex nut assembly.

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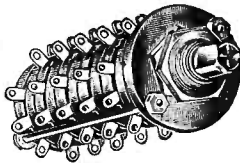
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For special-circuit combination applications. 1 to 12 decks. 2 to 11 contacts per deck. Rated at 20 Amps., 115 Volts, AC.

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NON-SHORTING (break before make) and **SHORTING** (make before break). From 1 to 6 decks. Accommodates up to 10 contact positions on each deck. With 10 positions, switch rotates 360° in either direction. When 9 or less positions—stops permit rotation only through required positions. Bushing, 3/8"—32 thread. Behind panel length from 15/32" (1 deck) to 2 7/8" (6 decks).

Rated to break—1 Amp., 115 volts, AC
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**GRAYHILL
MINIATURE SERIES 23
PUSH BUTTON SWITCH**



Momentary contact—single pole—single throw.

Bushing 5/16"—32 thread.

Rated 1/4 Amp., 115 volt, AC, non-inductive.

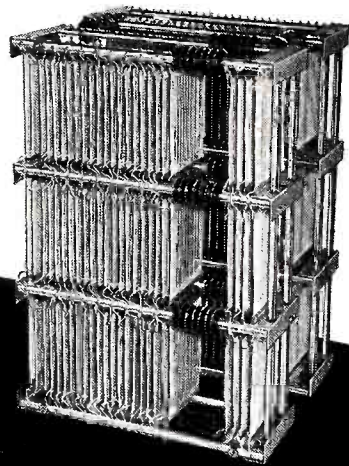
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Overall dimensions: 1.047" x 1/2"

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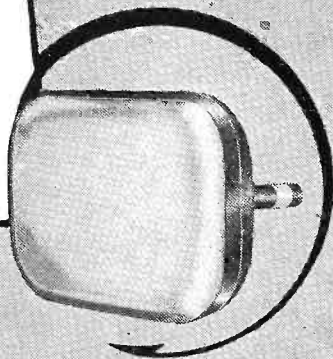
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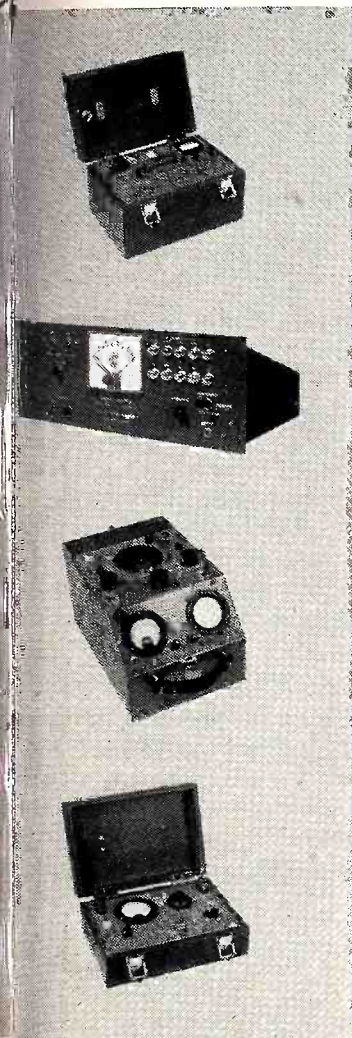
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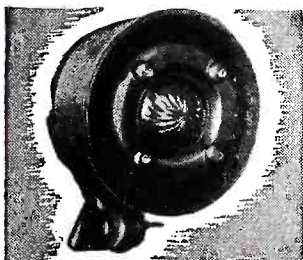
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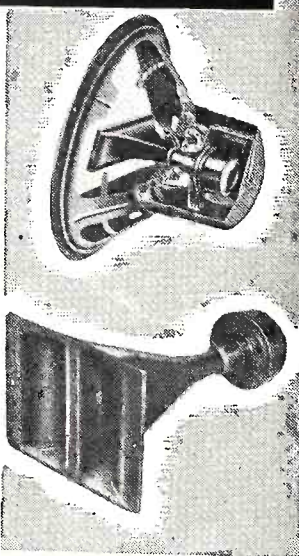


SUBMERGENCE-PROOF SPEAKERS These types are designed for use where extreme ruggedness and immunity to spray, gases, live steam or dust are essential. Function even under water, drain automatically, operate continuously regardless of exposure. Models available for directional or radial projection, wall or bulkhead mounting, swivel mount and with or without built-in line matching transformer and attenuator. Design is ideal for railroad use, shipboard, industries, docks, rough mobile work, etc. Model MM-2, illustrated, is rated at 15 watts continuous IPM, frequency 300-6000 cps, impedance 16 ohms.

FOR ALL HIGH FIDELITY REPRODUCTION REQUIREMENTS

WIDE RANGE CONE SPEAKERS Model 6201 comprises a superb 12" cone speaker with a driver type tweeter mounted coaxially. The cone speaker features a 24 oz. "W" shaped Alnico magnet and edged treated cone for distortion-free low frequency response. Tweeter has wide angle horn. A built-in LC crossover network and external high frequency attenuator are included. Capacity is 25 watts, response 45-15,000 cps, impedance 8 ohms. Other cone speakers for high fidelity, as well as submergence-proof or blastproof service for commercial and military applications.

HI-FREQUENCY TWEETERS University offers a complete line of single and double tweeter units for both 2000 and 600 cycle crossover. Exclusive University "reciprocating flare" horn construction assures uniform wide angle dispersion. A complete line of accessories are included—crossover networks, adapter for mounting tweeter on a standard cone speaker, etc. These tweeters may be added to any standard amplifier and speaker to provide the finest in high fidelity reproduction—and at a very low cost.



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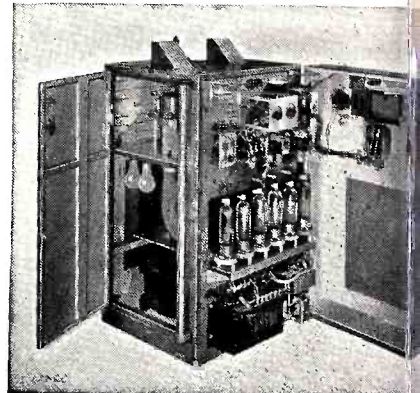


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PANELS, LIDS, DOORS MADE RF-TIGHT BY LOW COST METHOD

Electronic Weatherstripping, made of knitted wire mesh compressed to various sizes and shapes, effectively "seals" these openings against RF leakage as weatherstrips seal doors and windows.

Openings such as these are necessary for operating and servicing the electronic equipment housed in the metal cabinets. Yet these same openings destroy the shielding efficiency which an "unbroken" metal container would otherwise provide. Careful machining of mating surfaces



"Thermatron built by Radio Receptor Co.,

these openings is an obvious answer. Such work is expensive, and the close fit is often destroyed by repeated openings and closings, by warping of the lid or door and by corrosion of the metal surfaces. Numerous latches, screws, and other fasteners, closely spaced to help keep these joints RF tight, but are a time consuming nuisance when the cabinet must be opened and closed, and they are expensive to purchase and install.

Metex Electronic strips and gaskets eliminate these objections. Being made of metal, they are conductive; and when knitted they are resilient and conform to normal surface irregularities. They do not "block" the otherwise leaky openings with a gasket of flexible metal, and they seal the cabinet as effectively as a conductive shield as if the openings had been made.

Metex electronic strips and gaskets are easy to install. Not only are they inexpensive, but their use may well save more than their cost by eliminating many conditions that would otherwise be necessary. They are available in different sizes, dimensions and resiliencies to meet the varied requirements of specific electronic applications and can be made of various metals or alloys selected to meet actual or anticipated corrosive conditions.

A bulletin giving detailed information is available on request from the manufacturer, Metal Textile Corporation, East First Avenue, Roselle, N. J.

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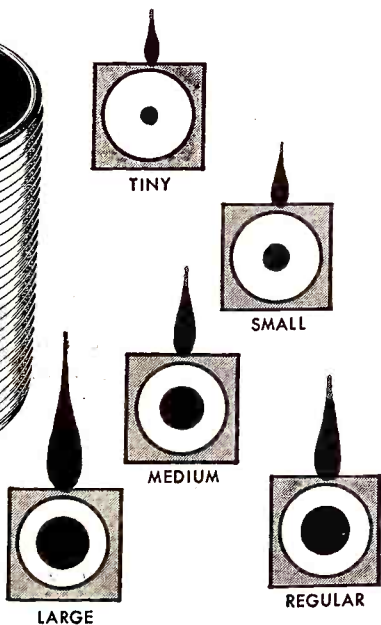
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ENGINEERED CORE SIZES!

Just as in selecting the right hat size, it's important to select the correct core size in Flux-Core Solder to give you the proper predetermined amount of Flux needed to do the job right. Core size, which controls the ratio of flux to solder regardless of strand size, is always uniform with Kester.



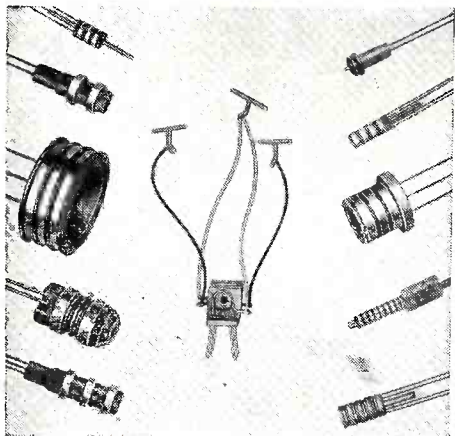
Kester Solder meets all applicable Government and Military specifications



With five different core sizes, available only in Kester Solder, you're sure of the desired solder-spread and absolute control of flux residue. This is a "job-insurance" feature, only to be had with Kester, that will see you through satisfactorily in your production on those exacting government contracts, and all other soldering.

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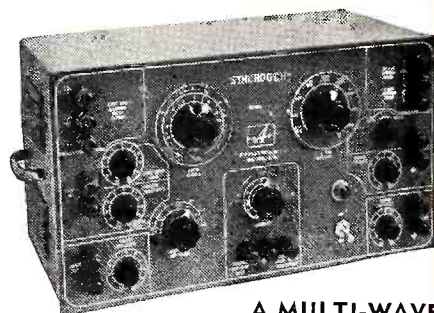
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MODEL E-10

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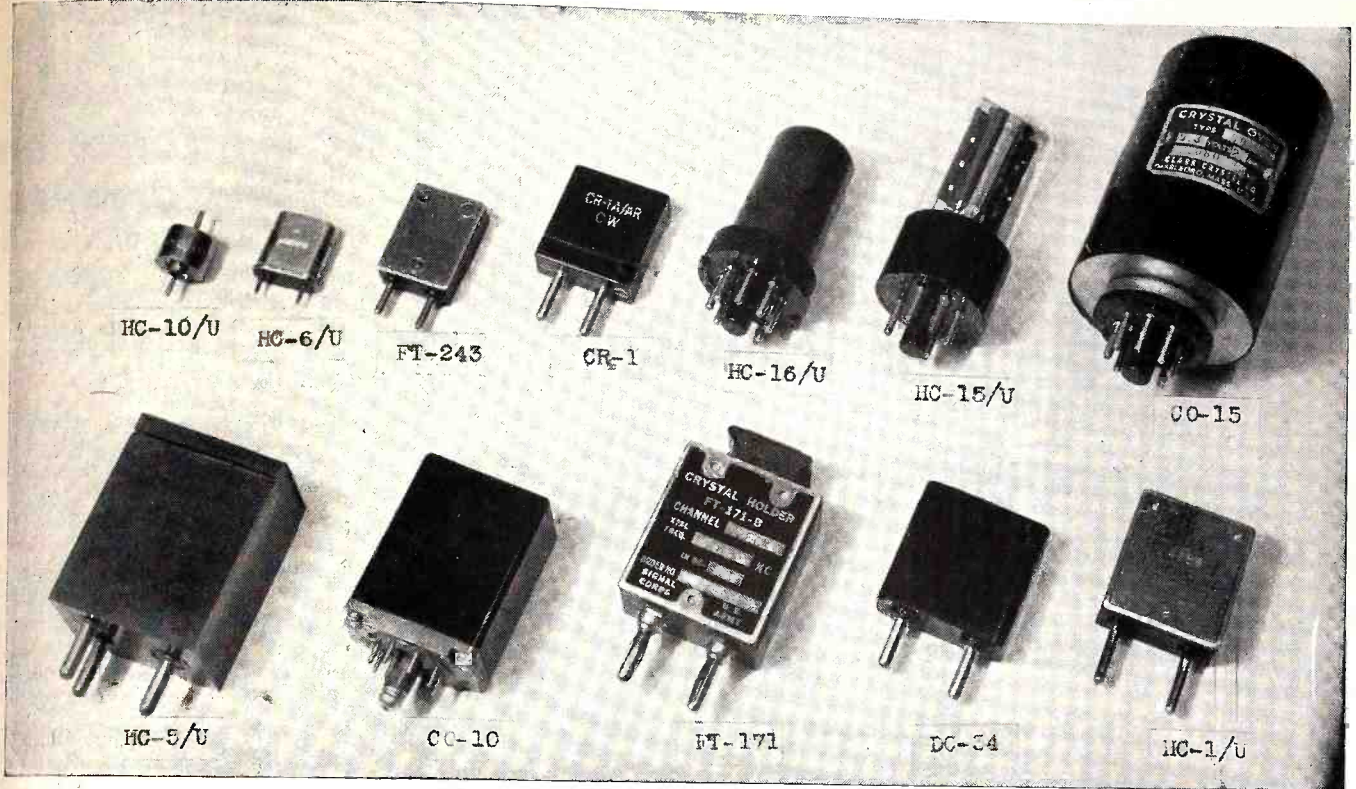
electronics BUYERS' GUIDE

ABC

ABF

CLARK

CRYSTAL UNITS CRYSTAL OVENS CRYSTAL TRANSDUCERS



FREQUENCY RANGE	FREQUENCY TOLERANCE	TEMPERATURE RANGE	CIRCUIT RESONANCE	CIRCUIT CAPACITY	MILITARY SPECIFICATION	CRYSTAL UNIT	CRYSTAL HOLDER	CLARK TYPE NO.
-150 Mc	± .005%	-55 to +90°C	series	---	---	---	HC-6/U	HSM-2UH
-75 Mc	± .005%	-55 to +90°C	series	---	MIL-C-3098A	CR-23/U	HC-6/U	HSM-2H
-75 Mc	± .002%	75 ± 5°C*	series	---	MIL-C-3098A	CR-32/U*	HC-6/U	HSM-2HO
-50 Mc	± .005%	-55 to +90°C	series	---	MIL-C-3098A	CR-24/U	HC-10/U	HSM-3H
-25 Mc	± .005%	-55 to +90°C	parallel	32 mmf	MIL-C-3098A	CR-33/U	HC-6/U	HSM-2HP
-20 Mc	± .005%	-55 to +90°C	series	---	MIL-C-3098A	CR-19/U	HC-6/U	HSM-2MS
-20 Mc	± .002%	75 ± 5°C*	series	---	MIL-C-3098A	CR-28/U*	HC-6/U	HSM-2MSO
-16 Mc	± .005%	-55 to +90°C	parallel	32 mmf	MIL-C-3098A	CR-18/U	HC-6/U	HSM-2M
-16 Mc	± .002%	75 ± 5°C*	parallel	32 mmf	MIL-C-3098A	CR-27/U*	HC-6/U	HSM-2MO
-15 Mc	± .004%	75 ± 5°C*	parallel	28 mmf	USN-16C13	CR-7/U*	HC-6/U	HSM-1MO
-20 Mc	± .002%	85 ± 5°C*	series	---	MIL-C-3098A	CR-35/U*	HC-6/U	HSM-2MSO
-15 Mc	± .002%	85 ± 5°C*	parallel	32 mmf	MIL-C-3098A	CR-36/U*	HC-6/U	HSM-2MO
-20 Mc	± .002%	85 ± 5°C*	parallel	32 mmf	MIL-C-3098A	CR-44/U*	HC-6/U	HSM-2MO
-15 Mc	± .02%	-55 to +90°C	parallel	32 mmf	MIL-C-16B	CR-1A/AR	CR-1	PM-5M
-15 Mc	± .02%	-55 to +90°C	parallel	54 mmf	AF71-1165A	DC-8	DC-8	HSM-8M
-10 Mc	± .02%	-55 to +90°C	parallel	25 mmf	MIL-C-239B	CR-5/U	FT-243	PM-2P
-10 Mc	± .02%	-40 to +70°C	parallel	12 mmf	MIL-C-10405	CR-6/U	FT-243	PM-2
0.000 Mc	± .005%	-40 to +70°C	parallel	25 mmf	MIL-C-10405	CR-10/U	FT-243	PM-2P
0.250 Mc	± .02%	-40 to +70°C	series	---	MIL-C-10405	CR-13/U	FT-243	PM-2F
10 Mc	± .02%	-40 to +70°C	series	---	MIL-C-10405	CR-8/U	FT-243	PM-2S
10 Mc	± .01%	-40 to +70°C	parallel	---	SC-Data Sheet	HC-1/U	HC-1/U	PM-4P
5-6 Mc	± .02%	-40 to +70°C	parallel	30 mmf	MIL-C-10405	DC-34	DC-34	PM-3LT
2-6 Mc	± .02%	-40 to +70°C	parallel	96 mmf	MIL-C-10405	DC-35	DC-35	PM-3LR
2-6 Mc	± .02%	-40 to +70°C	parallel	40 mmf	MIL-C-10405	FT-171-B	FT-171	PM-11T
2-2.8 Mc	± .02%	-40 to +70°C	parallel	25 mmf	MIL-C-10405	FT-171-B	FT-171	PM-11R
3-3 Mc	± .0075%	-55 to +90°C	parallel	32 mmf	MIL-C-3098A	CR-48/U	HC-6/U	HSM-2M
1-2 Mc	± .02%	-40 to +70°C	parallel	---	71-3021	CR-4/U	FT-241-A	WM-2H
0.6 Mc	± .02%	-40 to +70°C	parallel	---	71-3021	CR-3/U	FT-241-A	WM-2M
0.0 Mc	± .01%	-40 to +70°C	parallel	---	71-3021	CR-2/U	FT-241-A	WM-5
0.5 Mc	± .02%	-40 to +70°C	parallel	---	71-3021	CR-2/U	FT-241-A	WM-2
0.5 Mc	± .01%	-40 to +70°C	series	---	MIL-C-3098A	CR-45/U	HC-6/U	HSM-2F
0.5 Mc	± .002%	-40 to +70°C	parallel	20 mmf	MIL-C-3098A	CR-46/U	HC-6/U	HSM-2LF
0.5 Mc	± .01%	75 ± 5°C*	parallel	20 mmf	MIL-C-3098A	CR-47/U*	HC-6/U	HSM-2LO
0.5 Mc	± .002%	-40 to +70°C	series	---	MIL-C-3098A	CR-25/U	HC-6/U	HSM-2LS
0.33 Mc	± .007%	75 ± 5°C*	series	---	MIL-C-3098A	CR-26/U*	HC-6/U	HSM-2LSO
0.25 Mc	± .003%	-55 to +75°C	series	---	MIL-C-3098A	CR-39/U	HC-15/U	HSG-15LS
0.25 Mc	± .02%	70 ± 5°C*	series	---	MIL-C-3098A	CR-40/U	HC-15/U	HSG-15LSO
0.25 Mc	± .002%	-40 to +7°C	parallel	20 mmf	MIL-C-3098A	CR-37/U	HC-13/U	HSM-13
0.2 Mc	± .002%	75 ± 5°C*	parallel	20 mmf	MIL-C-3098A	CR-42/U*	HC-13/U	HSM-13O
0.2 Mc	± .01%	-40 to +70°C	parallel	32 mmf	MIL-C-3098A	CR-15/U	HC-5/U	WM-6P
0.2 Mc	± .01%	-40 to +70°C	series	---	MIL-C-3098A	CR-16/U	HC-5/U	WM-6S
0.2 Mc	± .002	75 ± 5°C*	parallel	32 mmf	MIL-C-3098A	CR-29/U*	HC-5/U	WM-6PO
0.1 Mc	± .002%	75 ± 5°C*	series	---	MIL-C-3098A	CR-30/U*	HC-5/U	WM-6SO
0.1 Mc	± .01%	-30 to +75°C	parallel	45 mmf	MIL-C-3098A	CR-43/U	HC-16/U	HSM-9LP
0.06-1 Mc	± .012%	-40 to +70°C	parallel	20 mmf	MIL-C-3098A	CR-38/U	HC-13/U	HSM-13L

*The Crystal Ovens described below are designed for use with these crystal units

CRYSTAL OVENS for Military and Commercial Applications
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 The CO-15 is available for all crystal units employing the HC-5/U holder.
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- SAN DIEGO: Shanks & Wright
- STOCKTON: Dunlap Whlse. Radio
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- ILL. CHICAGO: Allied Radio Corp., Lukko Sales Corp., Newark Electric Co.
- LA. NEW ORLEANS: Electronic Supply
- MD. BALTIMORE: Wholesale Radio Ets
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- MICH. ANN ARBOR: Wedemeyer Electronic Supply Co.
- MINN. MINNEAPOLIS: Electronic Center, Gopher Electronics
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- BUFFALO: Dymac, Inc.
- HEMPSTEAD: Davis Electronics
- N. Y. CITY: Harrison Radio Co., Harvey Radio Inc., Hudson Radio & T., Milo Radio & Electric, Radio Wire Tel., Terminal Radio Co.
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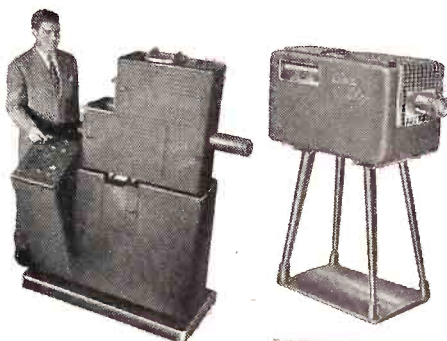
RESEARCH

Networks and independent stations everywhere recommend and approve Gray professional equipment for broadcast station use. Such broad acceptance is not unwarranted. The products here mentioned are designed and engineered by audio and video specialists . . . incorporate highest quality and serviceability . . . are rightfully leaders in the industry.

...for the finest equipment for AM-FM-TV station use

Gray TELOP I (TELEvision Optical Projector)

Make PROFITS GROW for TV Stations. The Gray Telop projects low-cost, easily produced TV 'commercials'. Without key-stoning, any two photos, titles, slides, etc., or small objects may be broadcast with superimposition, lap dissolve or fade-out. Four optical openings. Strip material may be used horizontally or vertically with Drives shown below.

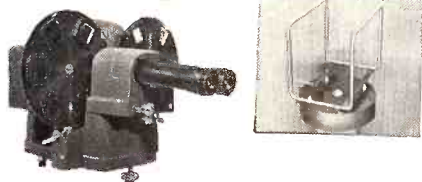


Gray TELOP II

With the versatile Gray TELOP II you can produce an amazing variety of professional-quality commercials at low cost. TELOP II presents selling messages with opaque cards, photographs and transparencies. You can get the effect of superimposition, lap dissolve and fade-out. Only limitation is your imagination. One operator does it all!

Gray 3A TELOJECTOR

Compact, portable unit for automatic, remote control projection of standard 2 x 2 slides in uninterrupted sequence . . . with studio effects of fading, lapping and superimposition. Projection alternates between two lens systems, with slide turrets changeable in seconds.



Gray 55A FILM CAMERA TURRET

Enables a single camera to serve up to 3 projectors. Centered on a rugged 'square' pedestal, requires a minimum of space. Heavy duty ball bearings. Rotates 360°.



Gray 11A VERTICAL SCROLL DRIVE

Attaches to any optical openings of the Telop. Accommodates roll stock vertically to televise commentary or the commercial in the same way movie introductions are projected.



Gray 60A FOUR-WAY FILM MULTIPLEXER

A precision arrangement of mirrors for operation of pairs of projectors simultaneously into a single TV camera or individually into two separate cameras. Enables a greater number of projectors to be used with fewer highly expensive TV cameras.

Gray 12A HORIZONTAL TAPE DRIVE

Attaches to optical openings of the Telop. News ticker tape fed from 8-mm reels is projected on any part of the screen, top to bottom, horizontally. May be used with test pattern or other commercial.

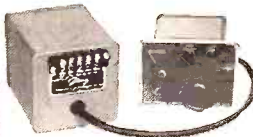


Gray 13A LIGHT BOX

Provides back lighting of transparencies for Telop use.

Gray 15R REVERSE CLOCK

For use where reversal is required. Designed to permit superimposing of the commercial or other copy.



Gray EQUALIZERS

MODEL 602B EQUALIZER has been specially engineered to provide constant velocity frequency response for both conventional and LP records. Four steps — flat, transcriptions, good records, poor records. Gray Equalizers used as standard professional equipment by broadcast stations.

MODEL 603 — Has 5 control positions. For both GE and Pickering cartridges.

Gray 108B VISCOUS DAMPED TONE ARM

For all records — 33 1/3, 45 and 78 r.p.m. Radically new suspension development on the viscous damping principle for perfect tracking of records and elimination of tone arm resonances. Instant cartridge change with automatic correct stylus pressure. Solves all transcription problems. IDEAL FOR LP RECORDS. For Pickering and GE cartridges.

Gray 106SP TRANSCRIPTION ARM

Designed to meet strictest requirements of modern highly compliant pickup cartridges. Three cartridge slides furnished enable GE 1-mil, 2 1/2-mil or 3-mil cartridges or Pickering cartridge to be slipped into position in a jiffy. No tools or solder! Superb reproduction of 33 1/3, 45 or 78 r.p.m. records. Low vertical inertia, precisely adjustable stylus pressure.

Please write Dept. RH for bulletins describing the above equipment.

GRAY RESEARCH

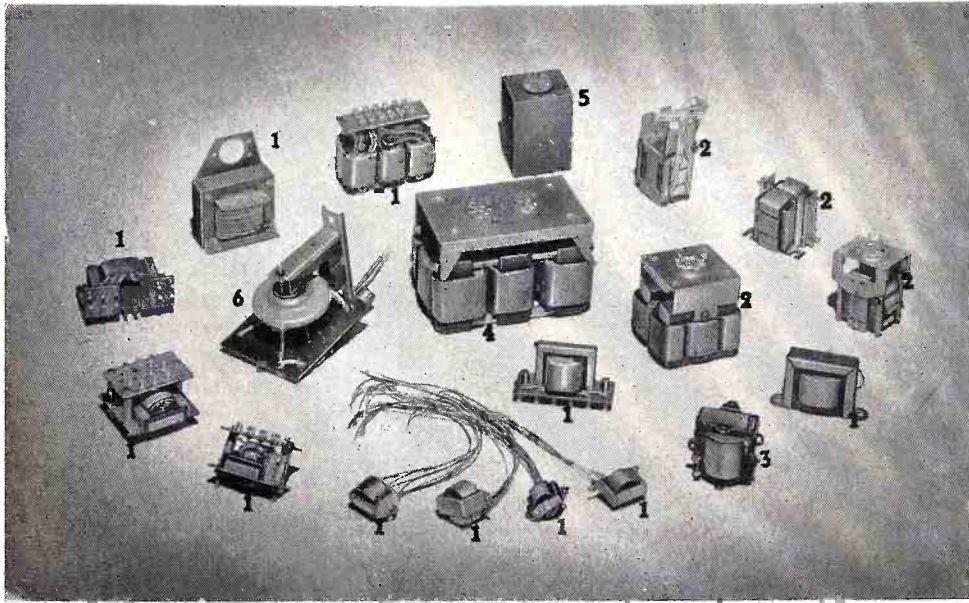
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Division of the GRAY MANUFACTURING COMPANY—Originators of the Gray Telephone Pay Station and the Gray Audograph

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Constantine Engineering Laboratories Co.

ISLAND AVENUE MAHWAH, NEW JERSEY

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Celco

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CELCO—leading specialists in centrifugally cast rotors for military low inertia and conventional commercial motor applications, offers a complete service on rotor sizes from .375" O.D. to 4" O.D. Celco's exclusive centrifugal casting process guarantees high density with no porosity in the bars and end rings of the squirrel cage.

Other centrifugally cast products are motor housings, special bushings, rings and impeller blades which are cast from various alloys. Radio frequency induction heating equipment permits casting of high melting temperature alloys.

Celco engineers have had extensive experience in experimental and development work. The knowledge that they have gained through the years permits them to design rotors that add superior performance to your finished motor.

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| Spinners | • | Omni-Range | • | ADF |
| Actuator | • | M G Sets | • | Mark V, VII, XIV |

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Constantine Engineering Laboratories Co.

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HM3 (3 1/2")

HM4 (4 1/2")

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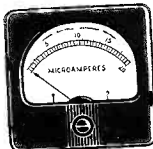
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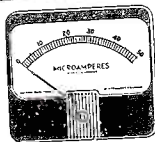
MODEL 52N Series 52

Accurate dependable service in smallest practical form. Model 52N (JAN MR24, MR25) 2 1/2" round phenolic case. 52S, 2 1/2" rectangular phenolic case. Model 52 RM, narrow flange brass case. Also available in brass case without flange, 52RMS.



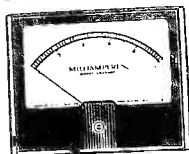
MODEL 53SN Series 53

Standard 3" commercial rectangular type (Model 53SN). Also available in 3 1/2" round phenolic case (Model 53RN) (JAN MR34, MR35).



MODEL 55

Large 4 5/8" x 4 1/8". Critical readability on 100° scale. Extremely accurate. Most popular case style in test equipment field.



MODEL 56

6 1/2" x 5 1/4" phenolic case. Large open face with 100° scale in 5 1/2" arc.

MODEL 57

8 1/2" x 7" open face, extra long scale. More than a mere overgrown 3" meter. Enlarged pole shoes—higher torque movement—higher damping factor. Accurate within 1%.

marion

ELECTRICAL INSTRUMENT COMPANY

408 Canal Street, Manchester, New Hampshire, U. S. A.

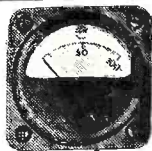
RUGGEDIZED METERS



HS Series

HERMETICALLY SEALED

Exceptionally accurate and sensitive even under extreme conditions of shock, vibration, mechanical stress or strain, weather and climate. Outstanding performance in any application. 2 1/2" and 3 1/2" types have standard A.S.A. dimensions.



HS1 (1 1/2")



HS2 (2 1/2")

HS3 (3 1/2")

RELATED PRODUCTS

NULL INDICATORS



HS2 (2 1/2")

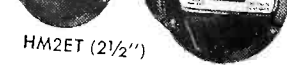
Ruggedized, Hermetically Sealed. Used primarily as bridge and potentiometer balance indicators and where an instrument with very high sensitivity about the zero or balance point is desired. Sensitivity at this point is 1 μ a per mm. or higher; the meter's shielded core construction give sharply logarithmic attenuation as it departs from null point and provides ample overload protection.



HS3 (3 1/2")

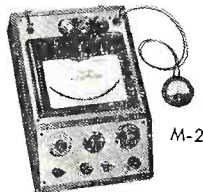
HM3ET (3 1/2")

ELAPSED TIME INDICATORS



HM2ET (2 1/2")

Two sizes, 2 1/2" and 3 1/2", standard JAN dimensions for panel mounting. Operating range -55°C to +85°C. Hermetically sealed. Magnetically shielded. Registers in 1/10 hour steps to 9999.9 or hour steps to 99999. Durable, self-starting synchronous motor. Available for 110-125, 220-250 volts, 50 or 60 cycles A.C.



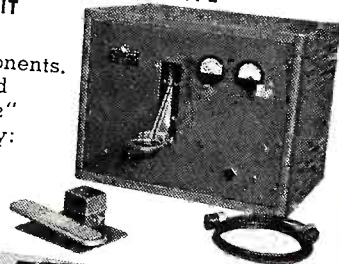
M-2

MULTI-RANGE METER TESTER

The only instrument of its type available today. Used for production inspection and calibration of electrical indicating instruments and to maintain high measuring standards in the laboratory. It is also used as a precise production limit bridge permitting acceptance tolerances to be set for any value from $\pm 1/2\%$ to $\pm 20\%$. Overall accuracy for current measurements better than 1/4 of 1%. Resistance range 0-5000 ohms. Power source 115V AC 60 cycles. Complete, no accessories required.

MARION MODEL PM1 PORTABLE BENCH TYPE INDUCTION SOLDERING UNIT

Improves and speeds up production of small components. Low cost, low powered and portable. Size: 15 3/4" x 21 1/2" x 15". 150 lbs. Power supply: 115 volts 60 cycles. Draws 775 watts full load, 100 watts standby.



NEW CONFUSION-PROOF MARION MULTI-DIALER

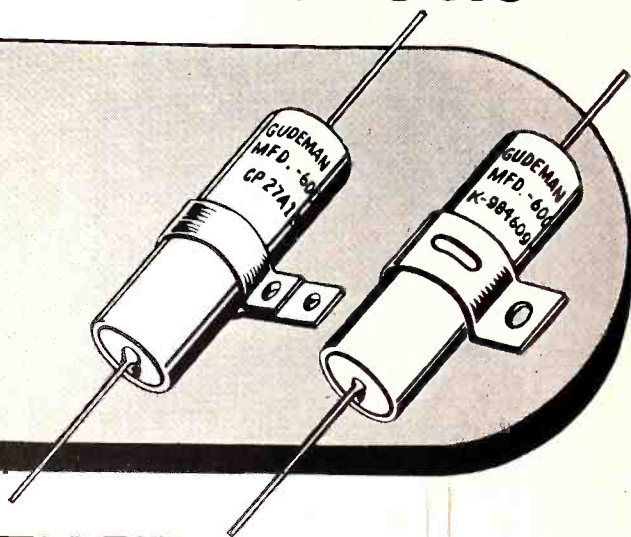
A multi-scale instrument which exposes only one scale to view at a time. At the same time, it automatically switches the appropriate internal or external circuitry associated with that scale. Five amperes and ranges in volts, milliamperes, microamperes and amperes. Ideal for panel, bench or field.



PRECISION BUILT CAPACITORS and GERMANIUM PRODUCTS

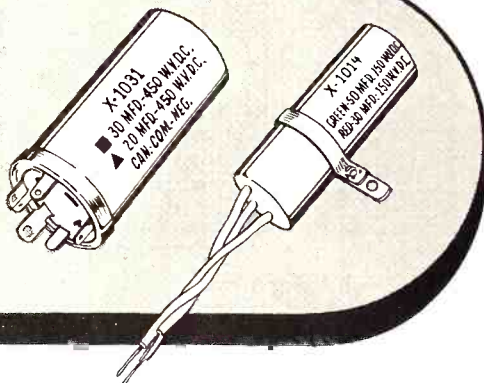
MINIATURE CAPACITORS

- Smaller than JAN — made in accordance with Electrical and Environmental requirements of JAN-C-25 or MIL-C-25A.
- Hermetically sealed case, glass-to-metal.
- Voltages from 100 to 1,000 WVDC.
- Series "XH" — 2500, 2600 and 2700, Operating Temperatures -55°C to $+125^{\circ}\text{C}$. Hi-Temperature Gudeman Impregnant No. 257.
- Series "X" — 2500, 2600 and 2700, Operating Temperatures -55°C to $+85^{\circ}\text{C}$. Hi-Temperature Gudeman Impregnant No. 257.
- Series "X" — 1800, 1900, 2100, and 2200, Operating Temperatures -55°C to $+85^{\circ}\text{C}$. Hi-Temperature Wax Impregnant.
- Tab or Extended Foil construction.
- Insulated or Uninsulated types.
- Various mounting styles available.



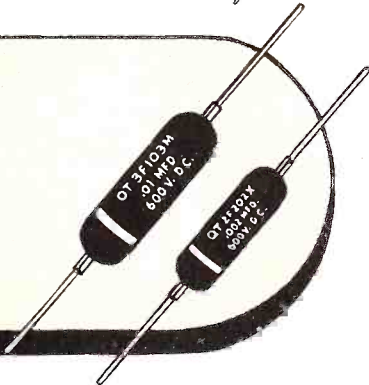
ELECTROLYTIC CAPACITORS

- Voltages from 10 to 475 WVDC.
- Hi-Temperature Operation 65°C to 85°C .
- 99.9 Purity Anode Foil.
- Paper Tubulars and Metal Cased units.
- Separate Air-Conditioned Plant.



MOLDED CASE CAPACITORS

- Voltages from 100 to 1600 WVDC
- Extended Foil — Non-Inductive Construction
- Mineral Oil Impregnated — Operating Temperatures -55°C to $+85^{\circ}\text{C}$.
- Hi-Temperature Phenolic Molded Case
- Rugged — Durable — Hard — Compact
- Leads soldered to brass eyelets firmly embedded in molded case — cannot work loose
- Ground end identified by projection in case and by colored band — sight and feel identification



GERMANIUM DIODES

- "Cat Whisker" Type Contact.
- AC-Electro Pulsed Contact.
- Controlled Purity single germanium crystal soldered to pin.
- Brass end caps securely locked in place — Integral with case.
- Low loss ceramic case.
- Tinned copper or nickel pigtails 1/32" Dia.



Here are but a few of the many types and styles of Gudeman Capacitors and Electronic Components designed for Military and Commercial applications.

Gudeman's complete line of precision built products include Fixed Paper Dielectric Capacitors, Metallized Paper, Plastic Film Dielectrics, Glass Case Capacitors, Power Factor Correction, Filters and Germanium Diodes.

In addition the Gudeman Company manufactures Fixed Paper Dielectric Capacitors in accordance with JAN-C-25.

For assistance on any special application or design problem write to the Gudeman Engineering Dept.

Write for free literature

THE GUDEMAN COMPANY

MAIN PLANT AND GENERAL OFFICE

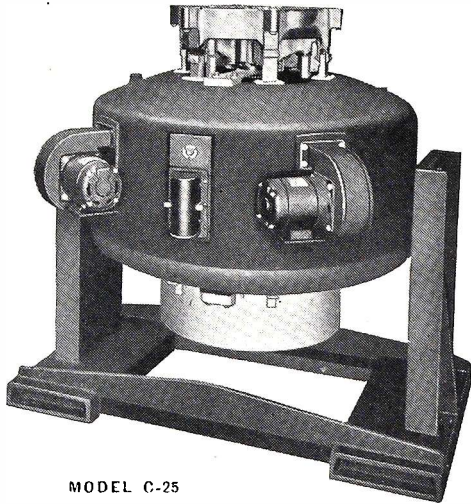
340 WEST HURON STREET

SUNNYVALE, CAL.

CHICAGO 10, ILLINOIS

• CHELSEA, MICHIGAN

FOR VIBRATION TESTING

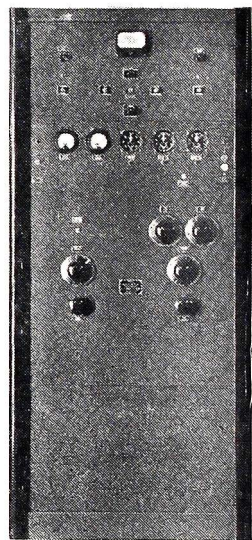


MODEL C-25

MB VIBRATION EXCITERS and CALIBRATORS

Producing results quickly, dependably, and often *visually*, MB Exciters have many important applications. For example: (1) Fatigue testing of mechanical and electrical structures to destruction under dynamic loads . . . (2) Determination of noise sources in automobiles, bodies and chassis, air conditioning equipment, blowers and similar equipment . . . (3) Shake testing of electrical components such as relays, switches or radio chassis to determine the ability of components to operate under high vibratory loads . . . (4) Determination of damping characteristics of rubber, steel, brass, plastics and other materials . . . (5) Identification of resonant frequencies and modes. These exciters also provide a convenient means for determining natural modes of wings, stabilizers, fin and control surfaces or aircraft structures.

These exciters are designed to conduct vibration tests to MIL-E-5272 and 41065-B and other specifications.



Model ACS-25 automatic cycling system for MB Models C-5 and C-25 Vibration Exciters. Exceeds requirements of MIL-E-5272. Provides for (1) Automatic control of frequency and acceleration or amplitude. (2) Automatic amplitude or acceleration control, manual frequency variation.

Model No.	Rated Force	Total Stroke	Power Supply	Usable Range c.p.s.
S-D	10 lb.	1/2 in.	Electronic	20 to 20,000
C-31*	25 lb.	1/2 in.	Electronic	4 to 70,000
C-1*	50 lb.	1/2 in.	Electronic	4 to 70,000
C-11*	50 lb.	1/2 in.	Electronic	4 to 70,000
S-3	200 lb.	1 in.	Rotating	3 to 500
C-5	750 lb.	1 in.	Rotating	3 to 2000
C-25	2500 lb.	1/2 in.	Rotating	3 to 1000
C-100	10,000 lb.	1/2 in.	Rotating	3 to 1000
C-250	25,000 lb.	1/2 in.	Rotating	3 to 1000
C-500	50,000 lb.	1/2 in.	Rotating	3 to 1000

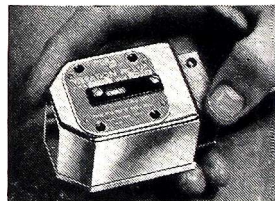
* Also suitable for calibration of vibration pickups.

FOR VIBRATION MEASUREMENTS



MB VIBRATION METERS

Precision Model M-1 and M-3 meters offer complete, compact units for vibration measurements when used in conjunction with the MB vibration pickup. Provide for accurate readings of accelerations, velocities, amplitudes. Simple, rugged, battery- or AC-operated, and portable, these instruments are outstanding for quality control or research.

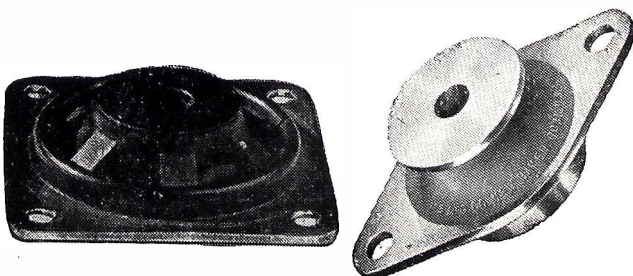


MB VIBRATION PICKUPS

Are sensitive to low amplitude vibration . . . can be used with wide range of equipment . . . simple field adjustment converts from horizontal to vertical use . . . electrically damped . . . maintains calibration over wide temperature ranges . . . resonant frequency below 5 c.p.s. Several models including Type 122 which is usable at temperatures up to 500°F.



FOR VIBRATION ISOLATION



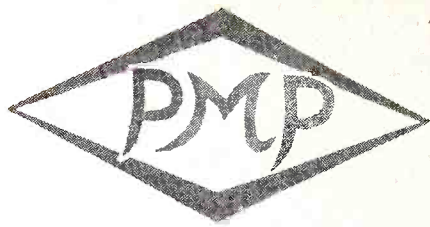
MIL-I-5432 (AN-I-16a) can be met with Isomode* Type 17 vibration isolators which are available for loadings of 1/2 to 100 pounds per unit. An outstanding feature is the equal spring rate in every direction.

ISOMODE* INDUSTRIAL-TYPE ISOLATORS—These units provide large deflection ratings together with high load capacity, small size, and exceptional stability. Have equal spring rates in all directions—mount at any angle—absorb vibrations for every plane. Unit load-range 50 lbs. to 2500 lbs. Write for the *Isomode* Design Chart.

OTHER TYPE ISOLATORS also available, including units for special applications; Isomode grommets; mounts with small dimensions. Contact us on your specific requirements.

* Reg. U. S. Pat. O.

Turret Terminals - Terminal Boards - Hardware



CHOOSE YOUR TERMINALS FROM THIS HANDY GUIDE



You'll find all the most popular terminal styles in this chart; for detailed specifications, ask for your copy of our new catalog No. 52-E.

FOR YOUR MINIATURIZED EQUIPMENT



We can furnish miniature terminals, miniature section boards, and miniature terminal boards made to your specifications — including fungus-proofing and other requirements of military specifications. Write for details.

NEW! MOLDED SILICONE PLASTIC TERMINALS



greatly improved characteristics — at standard cost. In five sizes and three mounting types, to meet the widest variety of applications. Write for full details.

For the first time, insulated turret terminals are available in a new molded silicone plastic with

 100	 T100	 200	 300	 350	
 400	 450	 500	 600*	 700*	
 800	 850	 900	 950	 1250	
 1260	 1270	 1300	 1400	 1500	
 2200	 2250	 2400	 2700*	 2800	
 3000	 3010	 3020	 3030	 3040	 3050
 5000*	 5050*	 6000*	 6050*	 8000*	

All terminals shown actual size except as noted. *Half size.

Precision

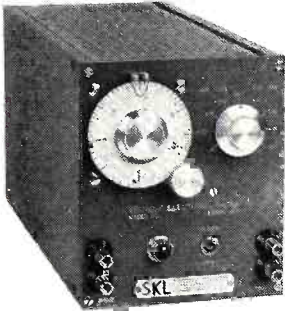
METAL PRODUCTS COMPANY
OF MALDEN
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SKL PRECISION INSTRUMENTS

FOR YOUR MEASUREMENT PROBLEMS

• QUALITY • ACCURACY • EASE OF OPERATION

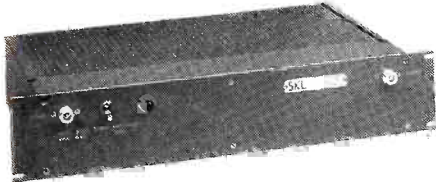
VARIABLE PRECISION FILTERS: SERIES 300



All SKL Series 300 precision variable electronic filters are designed to have responses identical to constant k-pi section filters. The filters have 18 db per octave per section attenuation in the rejection band.

MODEL	FUNCTION	CUT-OFF FREQUENCY RANGE	ACCURACY
300	Hi or low pass	20 cps to 200 kc	±3%, 20 cps to 20 kc ±5%, 20 kc to 200 kc
302	Band pass & rejection	20 cps to 200 kc	"
305	Hi or low pass	2 cps to 20 kc	±3% over entire range
306	Band pass & rejection	2 cps to 20 kc	"

WIDE-BAND CHAIN AMPLIFIERS: SERIES 200



Broad bandwidth, short rise time, stable gain, and linear phase shift make SKL Chain Amplifiers ideal for amplifying either continuous wave signals or pulses. Each model comes complete with a regulated power supply.

fiers ideal for amplifying either continuous wave signals or pulses. Each model comes complete with a regulated power supply.

MODEL	BANDWIDTH	GAIN	APPLICATIONS
202C	1 kc - 210 mc	20 db	Pre-amplifier
200B	1 kc - 210 mc	10 db	Phase Inverter
214B	200 cps - 100 mc	30 db	Pulse Amplifier for C.R.T.
212A TV	40 mc - 225 mc	21 db	TV Distribution System

504 SQUARE WAVE GENERATOR



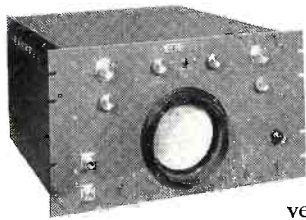
A rise time of .03 microseconds and a wave form without tilt or overshoot characterize the performance of this moderately priced instrument. The Model 504 Square Wave Generator has a frequency range from 0.5 cps to 500 kc in seven steps. The output voltage is continuously variable from 0 to 11 volts peak to peak. The unit comes complete with its own regulated power supply.

503 PULSE GENERATOR

Provides a rectangular pulse shape with a rise time of less than 1 millimicrosecond. Pulse width is varied by changing length of external cable; minimum pulse width less than 1 millimicrosecond while maximum pulse width is unrestricted. Pulse repetition rate is variable from 50 to 150 pps. The pulse output voltage is continuously variable up to 150 volts; either positive or negative. Output impedance is 50 ohms. The Model 503 Fast Rise Pulse Generator is a convenient instrument for testing the response of any wide-band network.



600 CATHODE RAY INDICATOR

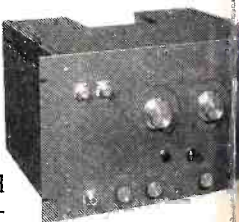


are positioning, intensity, focus, and astigmatism controls.

Designed to utilize the high writing speed capability of the type 5XP cathode ray tube in applications too advanced or special for standard oscilloscopes. In conjunction with the Model 610 Sweep Generator writing speeds up to 500 centimeters per microsecond may be observed. Conveniently mounted on the front panel

610 SWEEP GENERATOR

Provides continuously adjustable sweep speeds of from 0.05 to 500 centimeters per microsecond for a C.R.T. or other applications requiring a linear, rapidly-rising voltage. Used with the SKL Model 600 Cathode Ray Indicator, ignition voltages, lightning, dielectric breakdown and other very fast pulses may be displayed in detail.



WIDE-BAND TELEVISION DISTRIBUTION SYSTEM: SKL manufacturers complete T.V. distribution systems for community, apartment house, and industrial use. Details upon request.

For further information write

SKL SPENCER-KENNEDY LABORATORIES, INC.

186 MASSACHUSETTS AVE., CAMBRIDGE 39, MASS.

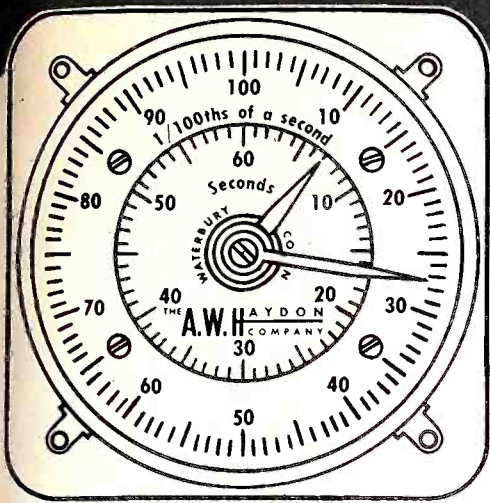
The Finest in Precision Equipment

New **A. W. HAYDON COMPANY**

STOP CLOCK

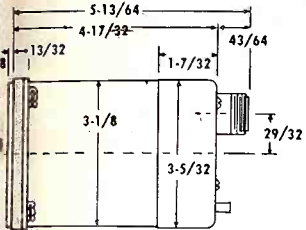
High Speed Stop Clock Accrued Seconds Indicator With Fluorescent Dial and Hands . . . Also Available For Other Intervals.

This new, hermetically-sealed *Stop Clock* further enlarges the complete line of A. W. HAYDON COMPANY A.C. and D.C. Timers, time delay relays and timing motors. This accurate, panel-mounted timer totalizes hundredths of a second up to a minute. Hermetically-sealed, it weighs approximately 2 lbs. Comes with automatic reset.



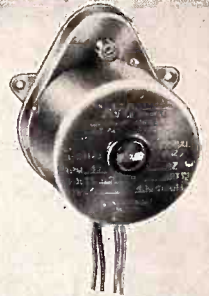
SPECIAL FEATURES:

- Precision timing measuring hundredths of seconds to one minute.
- Automatic reset.
- Hermetically sealed.
- For operation on 50, 60, or 400 cycles A.C. or 20-30V D.C. 400 cycle unit has D.C. clutch.



A. W. HAYDON CO. 400 CYCLE MOTOR has improved performance for aircraft use.

- Light in Weight — Small Compact Size.
- Now . . . you can run timing systems directly from 400 cycle power.
- Features fast start and stop, as well as high torque, and reversibility.
- Get all the facts in the new A. W. Haydon Co. catalog, described below.



SERIES #5700 CHRONOMETRIC D.C. GOVERNED TIMING MOTOR

- Extreme accuracy — 1/10 of 1%.
- Wide range of voltage, temperature, load.
- Light weight . . . Compact.
- Reversible.



SERIES 5300 D.C. TIMING MOTOR

- Rugged, Accurate, Reliable.
- Compact . . . Reversible, variable speed.
- Special windings available for operation from vacuum tubes or as tachometer generator.



TIME DELAY RELAY WITH ADJUSTABLE DIAL A.C. SERIES 11400 OR D.C. SERIES 6400

- Wide selection of time range.
- Features ease of adjustment.
- Flexible, compact design.
- Positive operation.



HERMETICALLY SEALED TIMER SERIES 6400, 11400, 7900, 12900, 3600

- Maximum protection against weather, humidity, explosive atmospheres, and high altitude.
- Light weight, corrosion-resistant enclosure.
- Flexible design.



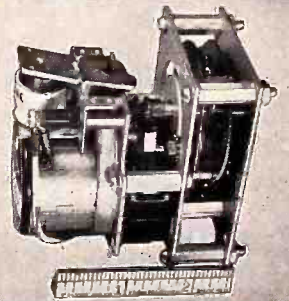
REPEAT CYCLE TIMER A.C. SERIES 13600 OR D.C. SERIES 3600

- Durable . . . Long life.
- Wide range of time cycles.
- Multiple control circuits.
- Easily adaptable to meet specific requirements.



DELAYED-RESET TIME-DELAY RELAY

New time-delay relay uses basic "Series 6400" d-c. and "Series 11400" a-c. time delay relay. Makes possible delayed reset proportional to time delay, and a circuit reclosure time proportional to length of current interruption. Reset is controlled by escapement mechanism.



SEND FOR CATALOG

PREFERRED WHERE
PERFORMANCE IS PARAMOUNT

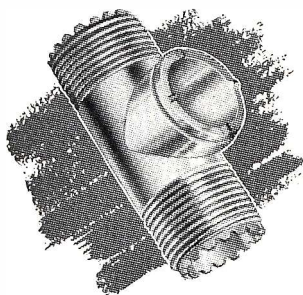


The
A. W. HAYDON
COMPANY

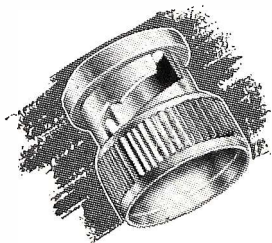
238 NORTH ELM STREET
WATERBURY 20, CONNECTICUT
Design and Manufacture of Electrical Timing Devices

THE *Mayhill* **PLATING PROCESS**
GUARANTEES

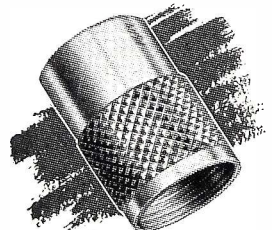
ACCURATE PLATING
IN
ELECTRONICS!



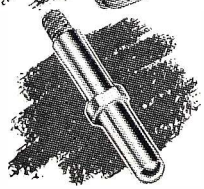
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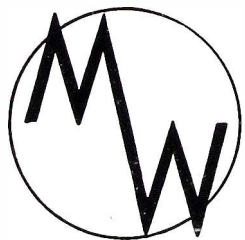
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- antennas
- audio
- cathode-ray tubes
- components
- electronic music
- filters
- measurements
- microwaves
- oscillators
- power supplies
- propagation
- pulses
- receivers
- transmission lines
- transmitters

**Full coverage
 electronic music**

A helpful feature in chapter on Electronic Music, a relatively new branch of electronics that is growing rapidly more important each day. Compiled here are articles giving information on both commercial and custom-built electronic organs.

Much of the material in the audio section supplements the basic articles on electronic music, since an audio amplifier is an essential part of every electronic organ.

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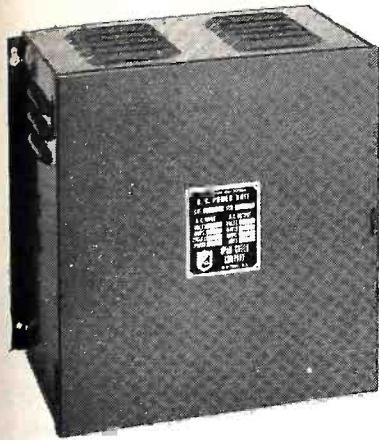
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POWER CONVERSION



BULLETIN NO. 118

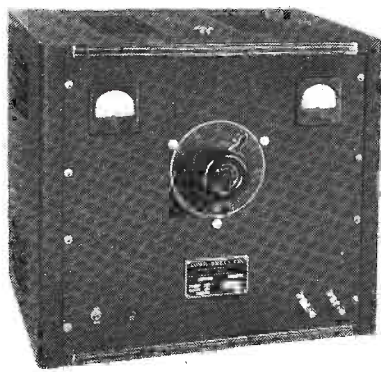
	D.C. OUTPUT		A.C. INPUT VOLTS 1Ø	CATALOG NO.
	VOLTS	WATTS		
115	125	115	115	A10
	125	230	230	A11
	125	440	440	A12
	250	115	115	A13
	250	230	230	A14
	250	440	440	A15
	375	115	115	A16
	375	230	230	A17
	375	440	440	A18
	500	115	115	A19
	500	230	230	A20
	500	440	440	A21
230	750	115	115	A22
	750	230	230	A23
	750	440	440	A24
	1000	115	115	A25
	1000	230	230	A26
	1000	440	440	A27
	125	115	115	B10
	125	230	230	B11
	125	440	440	B12
	250	115	115	B13
	250	230	230	B14
	250	440	440	B15
	375	115	115	B16
	375	230	230	B17
	375	440	440	B18
	500	115	115	B19
	500	230	230	B20
	500	440	440	B21
750	115	115	B22	
750	230	230	B23	
750	440	440	B24	
1000	115	115	B25	
1000	230	230	B26	
1000	440	440	B27	

Typical Applications

- Motors
- Generator Fields
- Relays, Solenoids
- Magnetic Chucks
- Brakes, Clutches, Pulleys
- Business Machines
- Alarm Systems
- Impulse Clocks

Selenium Rectifier POWER SUPPLIES

GENERAL PURPOSE



BULLETIN NO. 147

	D.C. OUTPUT		CATALOG NO.	
	VOLTS	AMPERES	115 V.A.C. 60 ~ 1Ø	230 V.A.C. 60 ~ 1Ø
O-6	25.0		K38	—
	50.0		K47	K48
	100.0		K56	K57
O-12	12.5		K65	—
	25.0		K74	K75
	50.0		K83	K84
O-28	10.0		K92	—
	20.0		K101	K102
	40.0		K110	K111

Typical Applications

- Aircraft Motors
- Dynamotors, Inverters
- Relays, Solenoids
- Electroplating
- Actuators, Valves

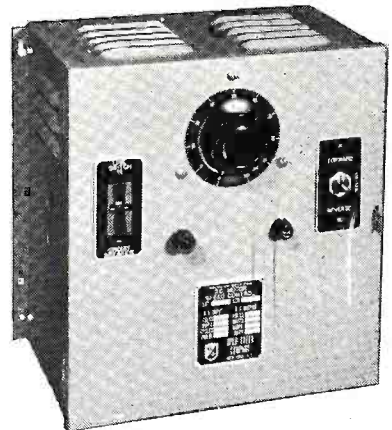
Long Life

High Efficiency

No Warm-up Time

Zero Maintenance

MOTOR SPEED CONTROL

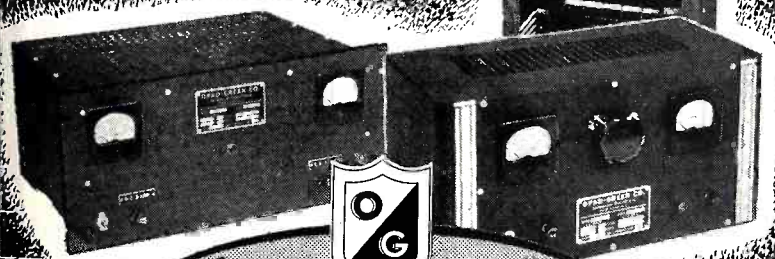
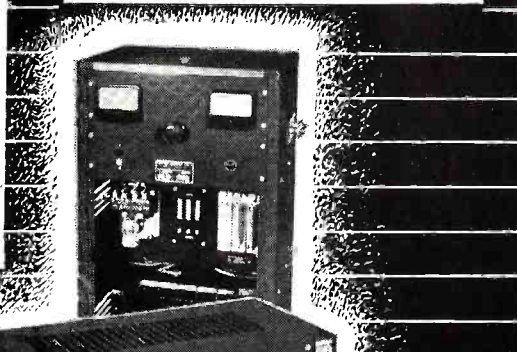


BULLETIN NO. 125

INPUT POWER REQUIREMENTS: 105-125 VOLTS 60 cycles A.C.			
MOTOR TYPE AND H.P. RATING	CONTROL RANGE IN PERCENT OF RATED SPEED	DYNAMIC BRAKING	CATALOG NO.
SHUNT UP TO 1/15 H.P.	0—100% OR 0—200%	NO	GM30
SERIES OR UNIVERSAL UP TO 1/15 H.P.	0—100%	NO	GM35
COMPOUND 1/4 AND 1/3 H.P.	0—100% OR 0—115%	YES	GM40
COMPOUND 1/2 AND 3/4 H.P.	0—100% OR 0—115%	YES	GM50

Typical Applications

- Coil Winders
- Lathe Feeds & Drives
- Drilling and Tapping
- Precision Grinders
- Conveyor Systems



The applications listed on this page are typical of the many fields, in which OPAD-GREEN standard power supplies are effecting economies and assuring satisfaction. In many cases, equipments have been custom-built to fill particular requirements. Our engineers are always ready to provide the best solution for your D.C. power problem. Send us your specifications, or request our form PEQ to aid in establishing your needs.



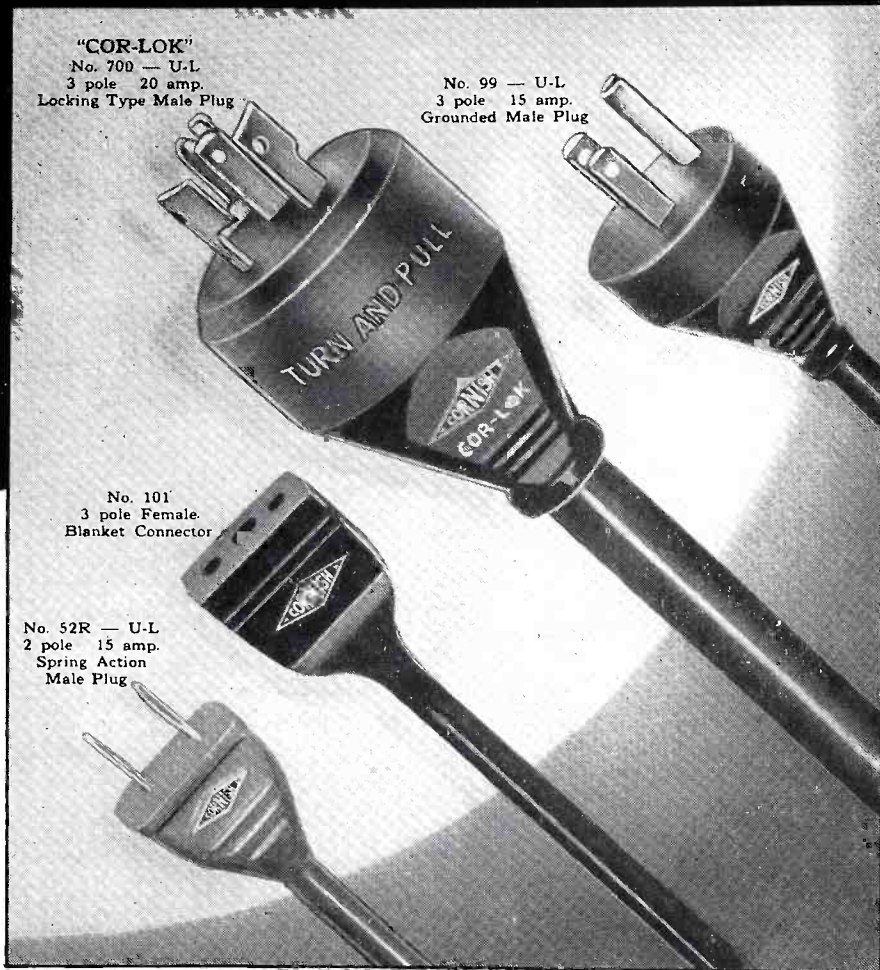
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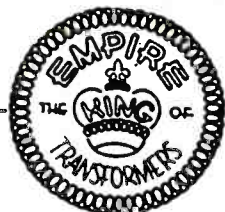
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LEDEX rotary solenoids solve remote control problems!

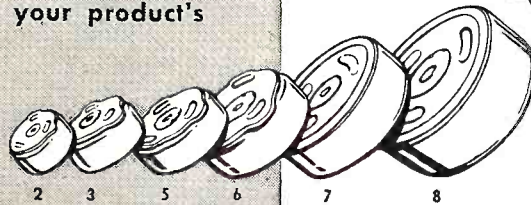
The many production applications of Leduc Rotary Solenoids vary from the dependable, snap-action tripping of airborne bomb releases to the actuation of rugged, hydraulic valves in heavy duty materials handling equipment. These compact, powerful, shock resistant Solenoids are manufactured with diameters from 1 1/8 to 3 3/8 inches. Predetermined rotation up to 95° can be engineered to suit your product's requirements. Starting torques for 45° stroke range from 1/4 pound-inches to 50 pound-inches.

Leduc Rotary Solenoids operate on direct current and are adaptable for various types of power take-offs, mountings and dust covers as illustrated at the right.

We supply to quantity users and solicit the opportunity to be of assistance in engineering a Leduc Rotary Solenoid to meet your product's requirements.



Magnetic action moves the armature along the solenoid axis. This action is converted into a rotary motion by means of ball bearings on inclined races.



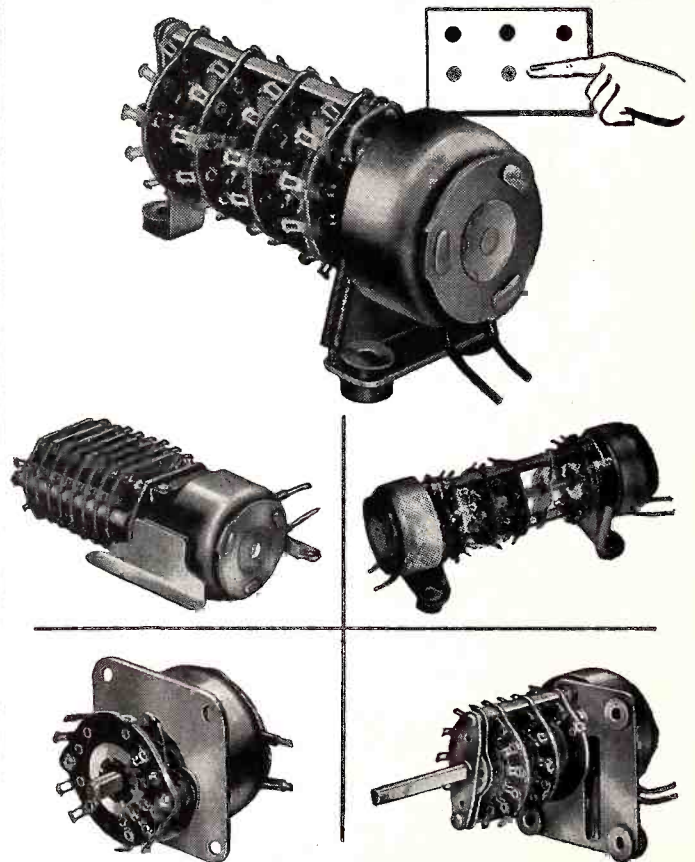
MODEL NO.	2	3	5	6	7	8
Diameter	1 1/8"	1 3/8"	1 7/8"	2 1/4"	2 3/4"	3 3/8"
Torque lb./Inches*	1/4	1	5	10	25	50
Weight lbs.	1/8	1/4	1/2	1	2 1/4	4 1/4

*45° stroke intermittent duty

LEDEX circuit selectors and stepping relays give remote control for multiple complex circuits.

Leduc Circuit Selectors and Stepping Relays can be remote controlled, are Rotary Solenoid operated, have positive detent action and are self-stepping or external impulsing. Many versatile designs of stepping, counting, adding and subtracting, latching, and circuit selecting relays are made possible by the combination of the Leduc Rotary Solenoid and wafer type rotary switches. Self-stepped or externally impulsed, the device is immediately adaptable to many remote control applications. A choice of wire sizes permits a wide range of operating voltages and power requirements. Various types of mountings further increase its adaptability. In addition to its positive control of multiple, complex circuits, a reserve of mechanical power is available for the performance of many duties other than switching operations.

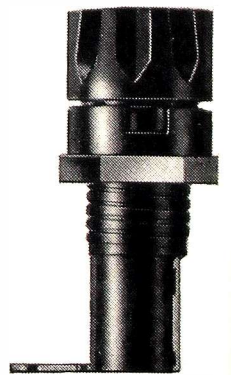
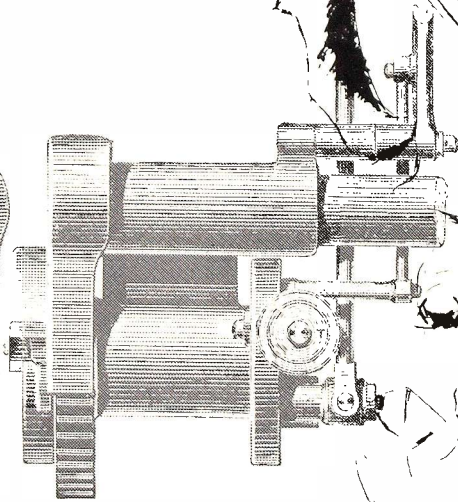
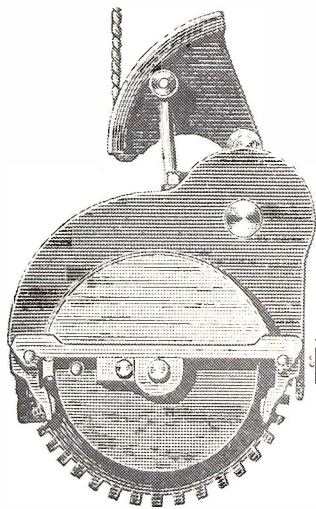
Write today for complete information on Leduc Rotary Solenoids and Leduc Circuit Selectors.



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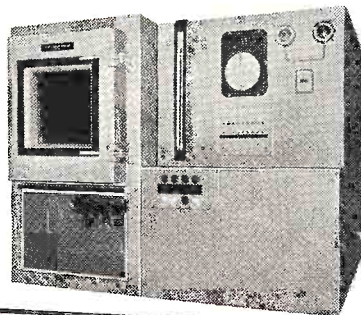
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For Tenney Test Chambers are precision-engineered for maximum efficiency and can be designed to simulate the complete range of temperature, atmospheric or pressure conditions found anywhere on earth—or above

it to altitudes of 120,000 ft. plus! They attain sub-zero temperatures quickly, maintain them efficiently and provide full instrumentation for accurate evaluation of complete test data.

TENNEYSPHERE ALTITUDE CHAMBERS

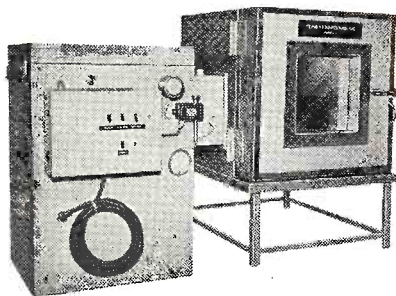
Designed to withstand atmospheric pressure and to simulate global conditions of pressures, temperatures and humidities. Altitudes from sea level to approx. 80,000 ft. Temperature range from plus 200°F to minus 100°F. Also simulates desired (20% to 95%) relative humidity.



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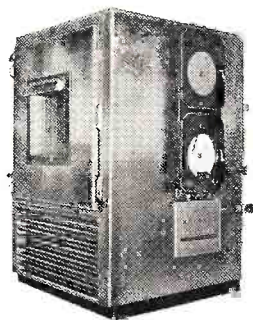
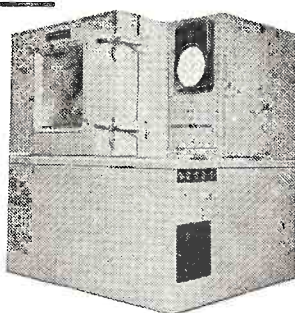
TENNEY SERVO UNIT

Portable air conditioning unit which may easily be attached to various types of laboratory enclosures—impact machines; tension machines; torsion testers; cold boxes and similar equipment. Through its use, articles undergoing testing, aging or weathering can be subjected to wide variations of humidity, heat and cold. Photo shows servo attached to companion chamber.



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AND HUMIDITY CHAMBERS**

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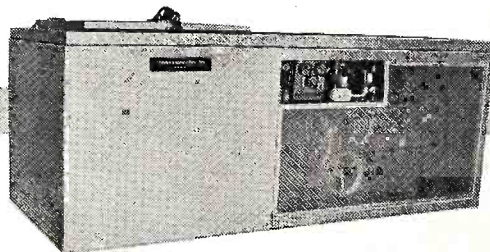


Model TR—Precision recorder controllers permit accurate simulation and check of temperatures to +200°F. Meets all Mil and JAN specifications for low- and high-temperature requirements by incorporation of temperatures down to -100°F. Humidities within 20%-95% range. Built in a variety of standard sizes.

Model TH—Specifically designed for a temperature range of +35°F to +180°F, and a humidity range of 20%-95%. Accurately simulates, controls, and checks all above-freezing temperatures. Can incorporate program control for meeting a wide variety of Mil specifications if desired. Manufactured in many standard sizes.

TENNEY SUB-ARCTIC INDUSTRIAL CABINETS

Designed for low-temperature testing of metals, radios, instruments, plastics, liquids, chemicals and pharmaceuticals. Temperature ranges of -40°F, -60°F, -95°F and -150°F are standard for each size.



8670

For further information on these and other Tenney test equipment, write to Tenney Engineering, Inc., Dept. J 26 Avenue B, Newark 5, New Jersey.

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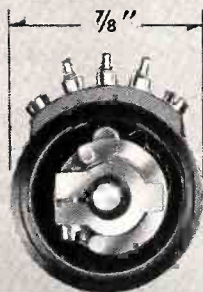
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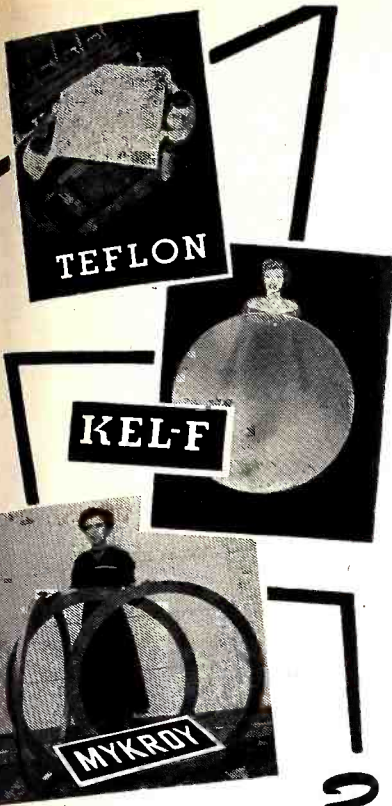
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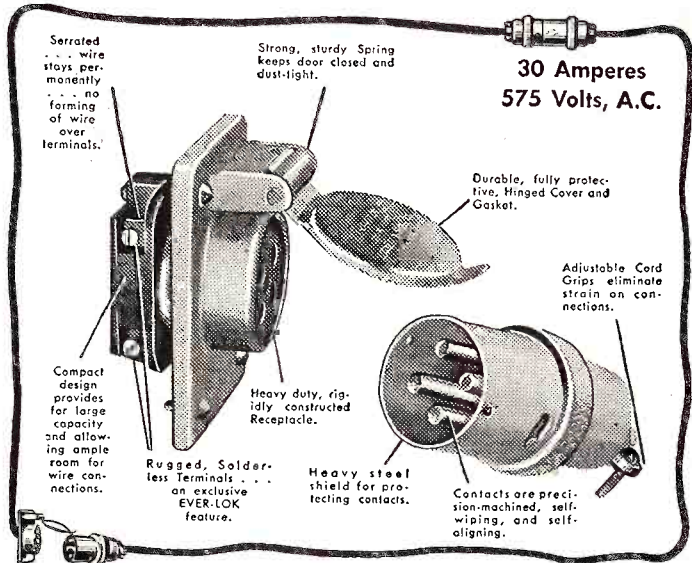
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R&S Ever-Lok heavy-duty plugs and receptacles carry full-rated load currents safely and with the greatest of ease under severe operating conditions. Industry and Utilities specify these rugged cord connectors because Ever-Lok has the right combination of features for heavy-duty service applications.

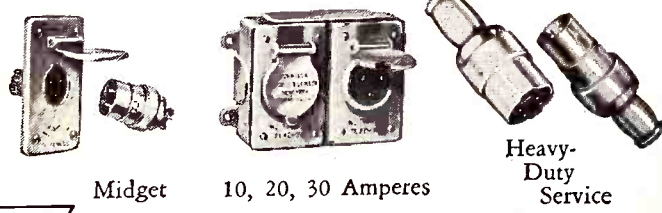
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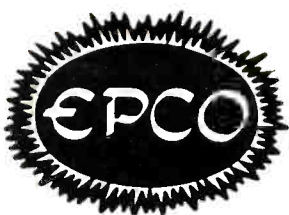
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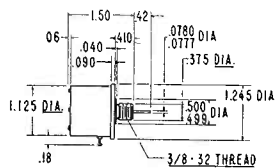
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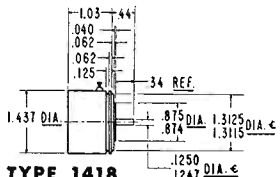
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Available in Ganged Assemblies



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Immediately following the Product Listings in the DIRECTORY SECTION

of this Issue is a list of more than 2500

TRADE NAMES of electronic and allied products.

They are intended for your use in determining the manufacturer's name when only a trade name is known.

HOOK-UP WIRE

TYPE SRIR, with glass braid covering in colors.
 Gauge sizes: #24 to #8 stranded, solid or flexible.
 Material: Extruded synthetic resin; flameproof, resists oil, easily cleaned.
 Weaving: Closely woven fiberglass in solid colors; white, black, brown, red, orange, yellow, green, blue and any of 100 combinations.
 Finishing: Smoothly finished with tough flame resisting lacquer.
 Voltage rating: 1000 RMS, diameter no larger than ordinary 600 RMS.
TYPE SRIR, plain or with nylon braid in colors.
TYPE SRLV, plain or SRLV(J) with nylon sheath: small diameter wire, 105° C rating, in all colors for miniature wiring.
TYPE SRMV, plain or SMRV(J), nylon jacket: 600 volt, 105° C hook-up wire.
TYPE SRHV, with either glass braid or nylon sheath: for voltage ratings of 2500, 5000 and 10,000 DC in electronic applications.
TYPE ANRW, plain or with cotton braid: for good abrasion and heat resistance. Insulated with neoprene compound for 600 volts, withstands baking at 250° F without damage - for leads on coils and transformers.

TYPE SRHT (Synthetic Resin High Temperature) is the designation for a series of hook-up wires for high temperature applications, and is made in gauge sizes #26 to #6, in all colors, with various types of coverings to be serviceable under different conditions and temperature ratings.
SRHT(GS): rated at 200° C, has a tinned copper shield with silicone treated fiberglass braid.
SRHT(SG); **(SN)**; **(GV-22-2)**; **(GV-22-3)**: single, two and three conductor wires for telemetering use.
SRHT(NN): rated at 125° C, is nylon braid covered and finished with flexible nylon coating.
SRHT(CV): rated at 150° C, is covered with a unique abrasion resistant braid saturated with silicone resin.
SRHT(GV): rated at 200° C, is covered with fiberglass braid saturated and finished with silicone resin.
SRHT(GF): rated at 250° C, is covered with glass braid saturated and finished with "Teflon."

NEW DESIGNS

TYPE ANNN: improved performance over temperature range -55° C to 100° C for aircraft electronic equipment.

TYPE SRPF(SN): new 125° C shielded wire. Miniature size, high abrasion, moisture, insulation resistance and stable capacitance over wide temperature range.

SHIELDED WIRES DESIGNED WITH LOW INTERNAL NOISE CHARACTERISTIC

BIW CABLE #626: #22 gauge, "Teflon" insulated, double shielded with outer protective glass braid. Diameter 0.150". Offers low noise (div.) characteristic for use with instruments utilizing piezoelectric effect. Stable over a temperature range of -60° F to 400° F.

BIW CABLE #634: #29 gauge, low capacity (18 mmf./ft.) of similar performance to #626 except with single shield. Diameter 0.125".

BIW CABLE #634A: same as #634 with double shield. Diameter 0.150".

"TEFLEX" HIGH TEMPERATURE 600 VOLT LEAD CABLES

PATENTED

Designed to meet the requirements of electrical equipment operating at high temperatures - a flexible cable of higher dielectric strength and insulation resistance, smaller in diameter, flameproof, resistant to corrosive vapors, acids and solvents. BIW "Teflex" cables fill the need for high temperature cables operating in wet locations and under severe conditions. All types are made in all sizes from #22 to #2 AWG in 600 volt rating and in high voltage ratings as may be required from 1000 to 25,000 volts.

BIW TYPE PFGV: consists of flexible copper conductor insulated with a laminated layer of DuPont "Teflon" sealed with silicone to form a moisture-proof insulation which remains flexible after exposure to high processing temperatures and may be operated at 200° C continuously. Covered with a unique heat and abrasion resistant braid.

BIW TYPE PFGGV: with double braid covering.

BIW TYPE PFGF: with "Teflon" finished glass covering.

TYPE NO.	O.D. ± 0.010"	AWG	STRANDS	RATING AMPS.
PFGV-600-22	.080"	#22	7	6
PFGV-600-20	.085"	#20	7	10
PFGV-600-18	.100"	#18	19	15
PFGV-600-16	.110"	#16	19	20
PFGV-600-14	.125"	#14	19	27
PFGV-600-12	.145"	#12	19	37
PFGV-600-10	.170"	#10	104	50
PFGV-600-8	.210"	#8	133	67

CUSTOM MADE MULTI-CONDUCTOR NEOPRENE SHEATHED CABLES

PATENTED

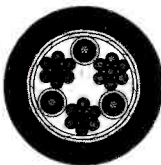
These cables employ the use of laminated "Teflon" tape insulation which remains flexible over temperatures from -80° F to 400° F and withstands these temperatures with little change in electrical or physical properties. The suffix "GV" refers to a "Teflon" tape and treated fiberglass covering which can be rated at 400° F. The suffix "GL" refers to a glass braid; "NL" refers to nylon braid, lacquer coated, smaller in diameter which can be rated at 250° F.

TYPE NO.	CONDUCTOR	O.D. ± 0.005"	WT. 1000'	CAP. PER FT.	OHMS PER FT.	PRICE PER FT.	
COX-2FS-011-GL or NL	0.011" cw	.075	5	30	50	.13	Miniature cables
COX-3FS-011-GL or NL	0.011" cw	.090	6	24	70	.16	flexible cables
COX-4FS-011-GL or NL	0.011" cw	.125	9	17	93	.21	
COX-2FS-22-NL	#22 str.	.125	14	30	50	.16	Small diameter flexible cables
COX-2FS-22-RS	#22 str.	.170	25	30	50	.18	
COX-2FS-22-GV	#22 str.	.135	18	30	50	.25	
COX-3FS-22-GL or NL	#22 str.	.170	20	20	73	.25	
COX-3FS-026-GV	0.026" cw	.240	40	20	73	.70	RG-124/U
COX-4FS-22-GV	#22 str.	.210	35	16	93	.90	Size of 62/U
COX-4FS-026-GV	0.026" cw	.245	40	17	90	1.00	Size of 62/U
COX-2FS-20-GV	#20 str.	.165	25	28	52	.45	Smaller than 58A/U
COX-2FS-032-GV	0.032" Ag.	.190	36	28	52	.52	RG-159/U
COX-2FS-16-GV	#16 str. Ag.	.260	50	30	50	1.25	Equal to 5A/U
COX-2FS-13-GV	#13 str. Ag.	.370	140	30	50	2.00	RG-115/U

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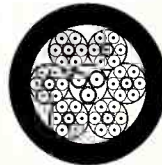
#197

#391 - 2 #14 high voltage, 1 #14 ground, 5 #18 300 volt control circuits.



#391

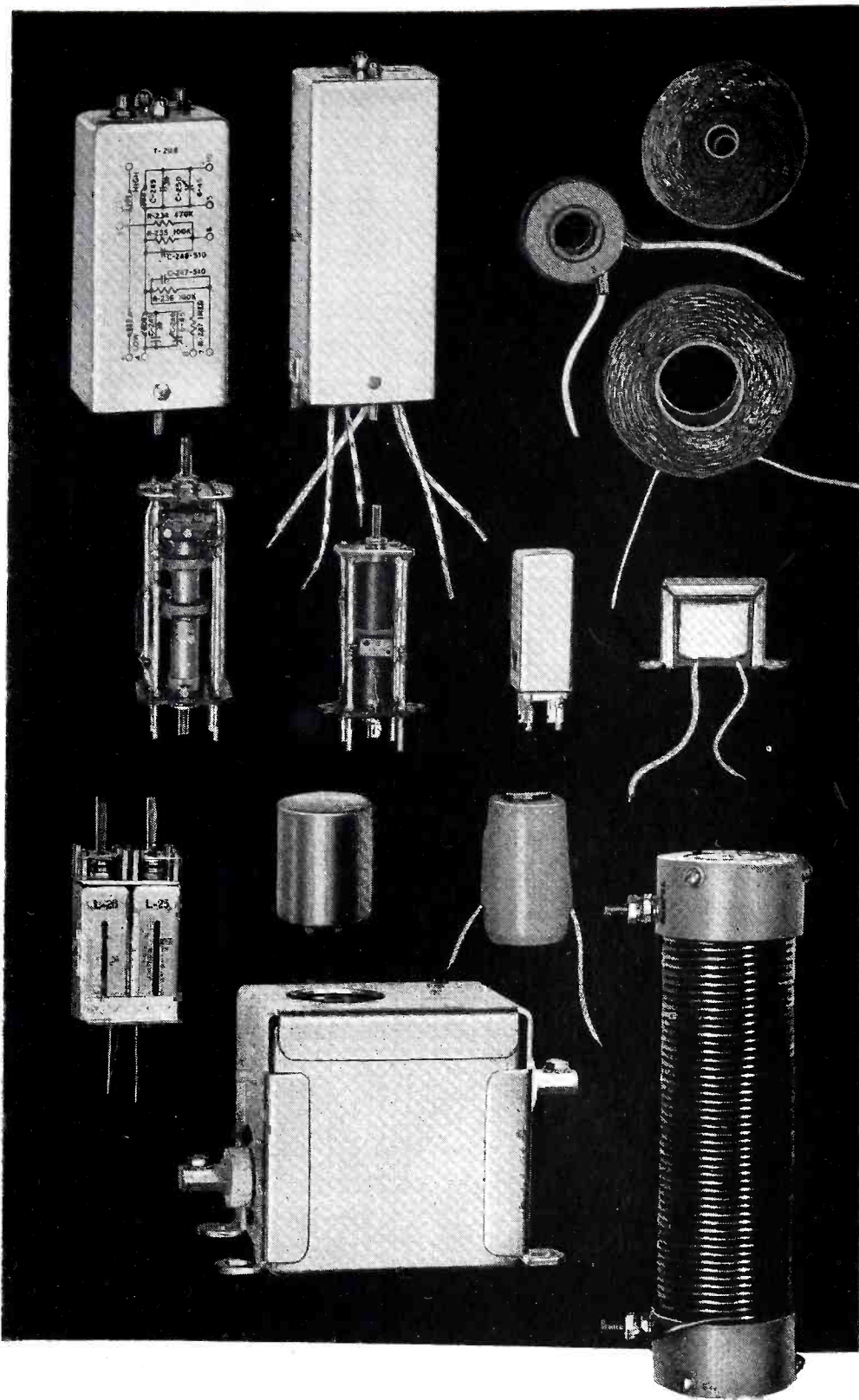
#587B - 45 conductors with three 70 ohm coaxials for radar equipment.



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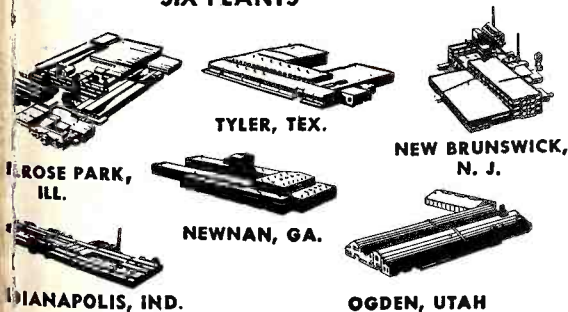
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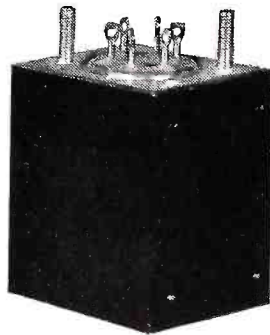


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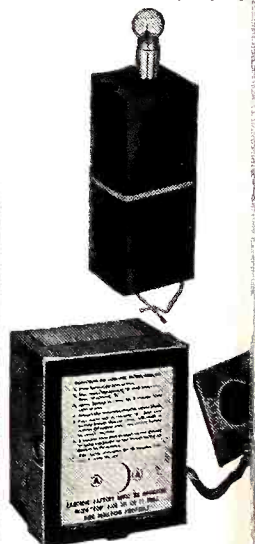
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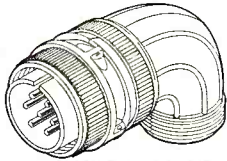
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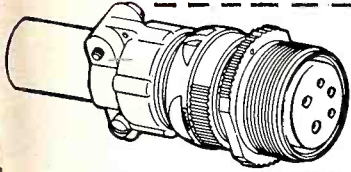
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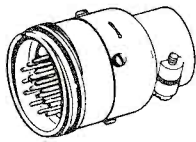
AN

AN Series... conforming to military specification MIL-C-5015. 15 diameters and 260 layout patterns for the aircraft, communications, instrument and electronics industries. 6 approved shapes, AN 3100 to AN 3108. AN-M Series also meets the specification.



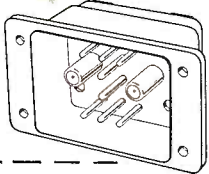
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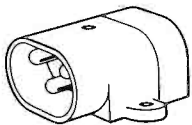
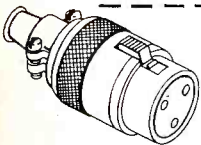
K, RK

K, RK Series... 8 basic shell shapes, 8 diameters and 204 cataloged layout variations. Special Acme thread. For aircraft, communications, instrument and electronic applications.



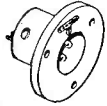
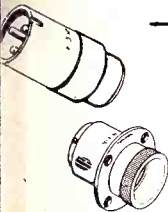
DP

DP, DPB, DPD, DPD2, DPR and DPM Series... Used for rack-and-panel instrument panel and sub-assembly applications. Rectangular in shape with 27 basic layout variations in DPB and DPD.



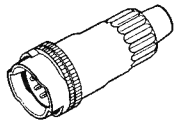
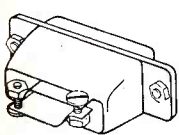
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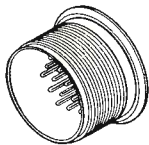
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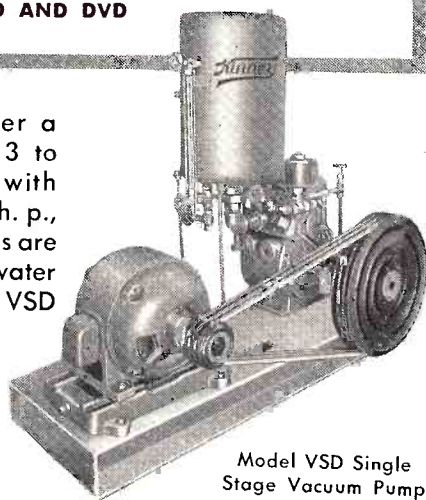
Almost without exception in the United States and in an increasing number of plants abroad, Kinney High Vacuum Pumps are standard equipment for exhausting lamps and tubes. They also provide low absolute pressures for sintering alloy metals, coating lenses, refining rare metals and producing blood plasma, penicillin and other drugs. They are used effectively wherever a high vacuum pump can be applied including cyclotron evacuation, atom smashing, and condenser vacuum service in power plants. Over 10,000 installations serve a wide variety of fields.

The plungers in Kinney Vacuum Pumps have no contact with cylinder surfaces due to the unique method of automatic lubrication, resulting in a no-clearance pump of extremely long life. Simple and efficient in design, these pumps have established an impressive record for dependability and low cost operation.

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MODELS VSD AND DVD

Nine pump sizes cover a capacity range from 13 to 1800 cu. ft. per min. with motors from 1/2 to 75 h. p., respectively. VSD Models are furnished either air or water cooled (except Model VSD 556 - air cooled only). All DVD Models furnished water cooled only. Single Stage Pumps on a blank test produce low absolute pressures of 10 microns (.01 mm Hg.) or better.

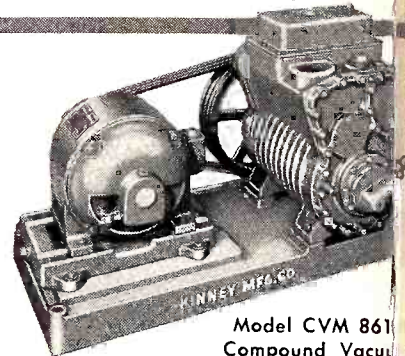


Model VSD Single Stage Vacuum Pump

COMPOUND VACUUM PUMP

MODELS CVM 556 AND CVM 8610

Four sizes of Compound Pumps are available in capacities of 2, 4.9, 15.2, and 46 cu. ft. per min., respectively. The working mechanism is similar to the Single Stage but the two cylinders are connected in series. The Compound Pump



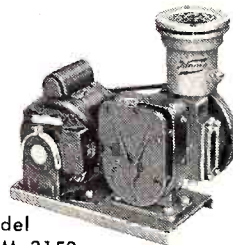
Model CVM 8610 Compound Vacuum Pump

has an air cooled casing of unique design and special provision for oil sealing and lubricating the high vacuum working parts. These compound pumps test to low absolute pressures of 0.2 micron (.0002 mm Hg.) or better.

SMALL VACUUM PUMPS

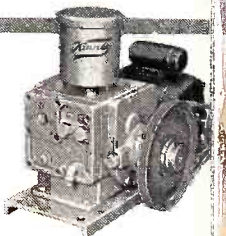
MODELS CVM 3153 AND CVM 3534

These small Kinney Vacuum Pumps combine the advantages of small size and high pumping speed. Model



Model CVM 3153

CVM 3153 has a free air displacement of 2 cu. ft. per min.



Model CVM 3534

It weighs only 70 lbs., complete with its 1/4 h.p. motor. Model CVM 3534 has a displacement of 4.9 cu. ft. per min. Its weight: 140 lbs. with 1/2 h.p. motor. Both pumps test to low absolute pressures of 0.2 micron (.0002 mm Hg.) or better.

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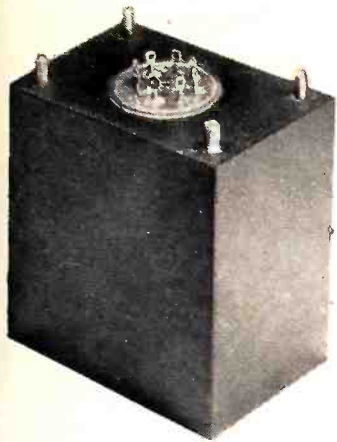
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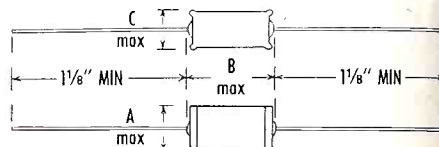
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250-vdcw Rating					
70	.24	.30	.25	220	300 $\mu\mu\text{f}$
72	.30	.57	.30	430	1000 $\mu\mu\text{f}$
29	.47	.93	.25	1000	2000 $\mu\mu\text{f}$



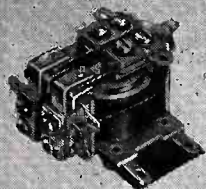
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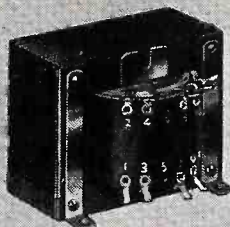
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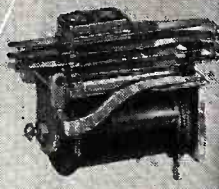
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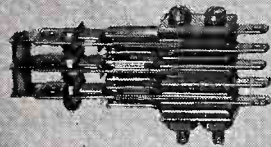
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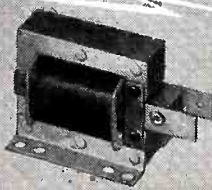
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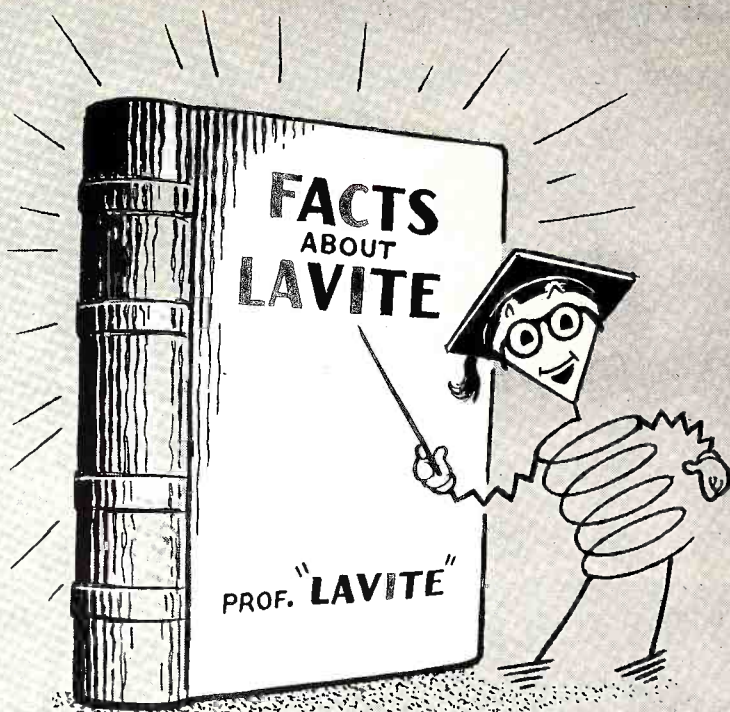
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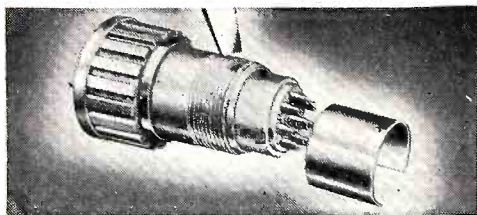
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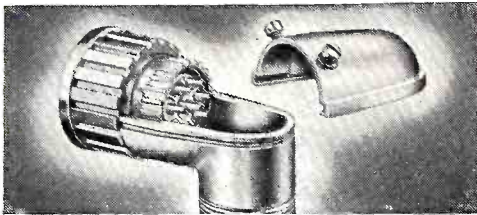
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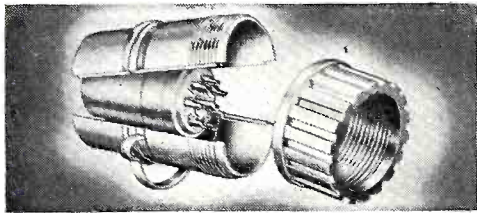
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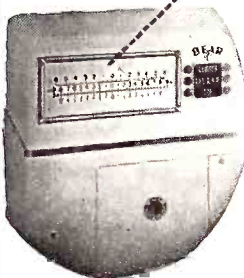
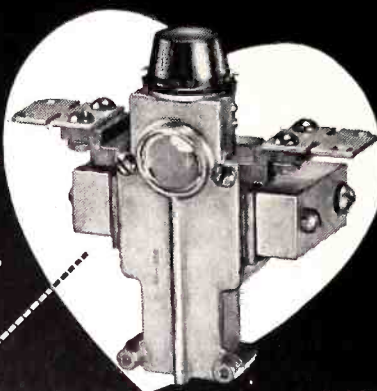
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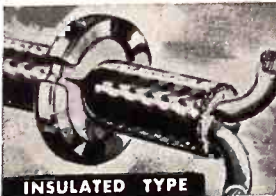
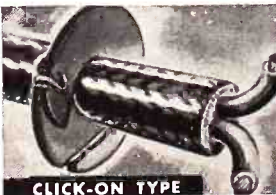
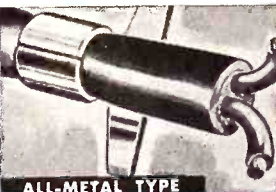
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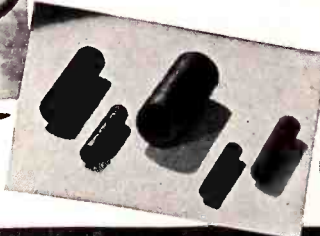
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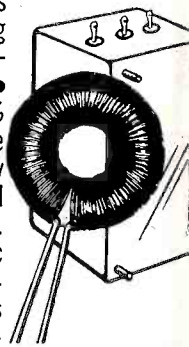
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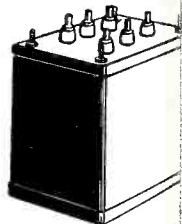
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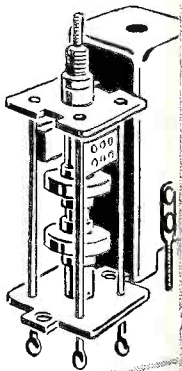
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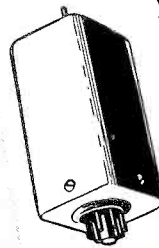
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CURRENT, half-wave: 1.5 ma to 60 ma
VOLTAGE, DC output: 20 volts to 10,000 volts

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RMS applied voltage: From 26 volts to 104 volts
RMS input current: max. 500 microamperes
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DC output current: avg. from 200 microamperes to 5 milliamperes

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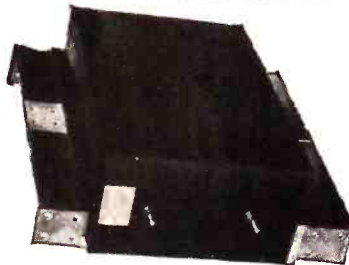


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VOLTAGE, DC output: 20 volts to 4,000 volts

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19 1/4 x 21 3/4
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OTHER NEUTRONIC POWER SUPPLY UNITS

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21KR	1-10 KV	10 ma. @ 5 KV	.5%
21M	1-15 KV	6 ma. @ 10 KV	
21MR	1-15 KV	6 ma. @ 10 KV	.5%
22C	3-26 KV	2 ma. @ 18 KV	
22CR	3-26 KV	2 ma. @ 18 KV	.5%
22M	3-26 KV	3 ma. @ 20 KV	
22MR	3-26 KV	3 ma. @ 20 KV	.5%
23C	5-40 KV	1.3 ma. @ 25 KV	
23CR	5-40 KV	1.3 ma. @ 25 KV	.5%
23M	5-45 KV	1.5 ma. @ 30 KV	
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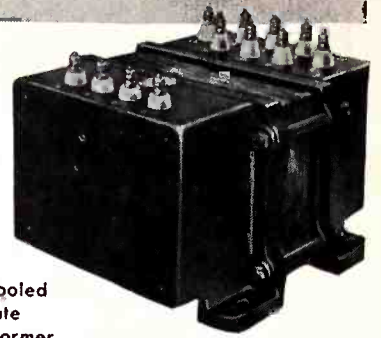
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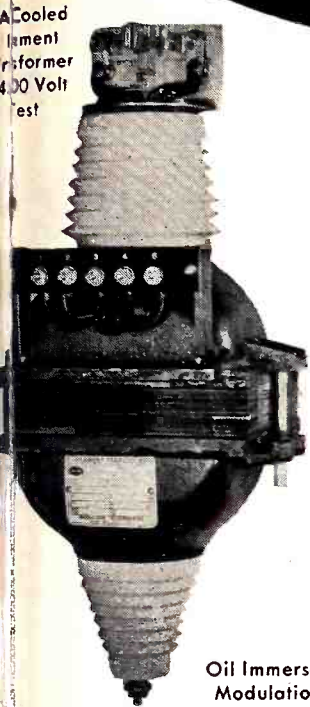
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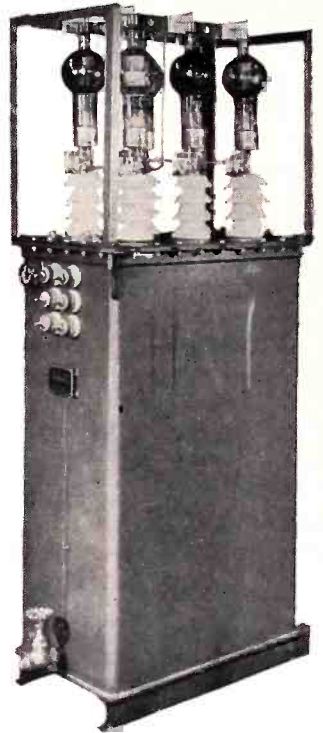


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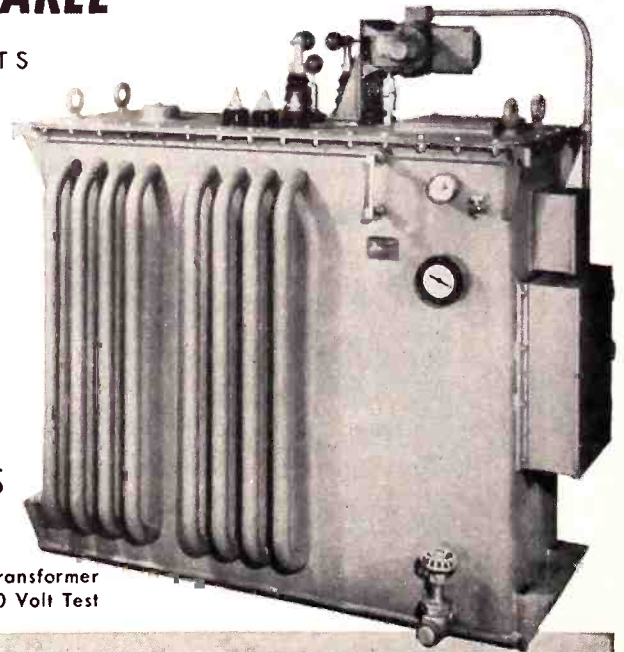
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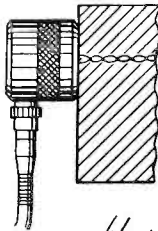
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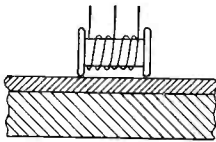
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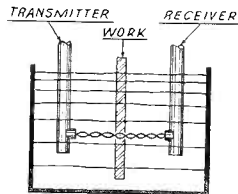
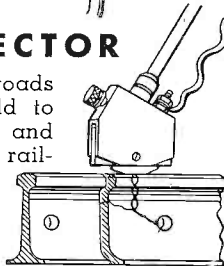
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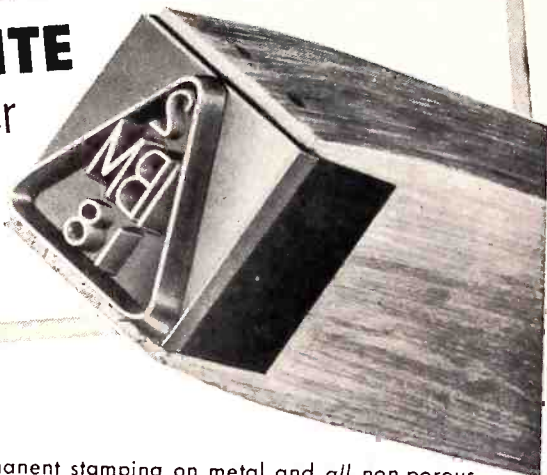
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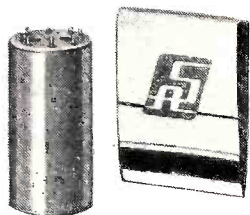
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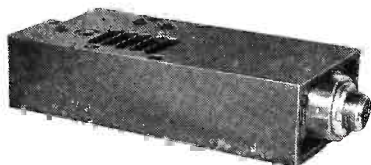
less than 1 inch diameter
less than 2 inches long
weight only 3 ounces

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Weight — 3 oz.	Altitude — 0-60,000 feet
Range — 420°/second	Maximum Linear Acceleration — 60 G axis
Pick-off Excitation — 6.3 Volts, 400 Cycles	Maximum Shock Acceleration — 60 G axis
Motor Excitation — 6.3 Volts or 26 Volts, 400 Cycles	Maximum Vibration (0 to 300 cps) — 5 any axis
Resolution — Better than .05°/second	
Sensitivity — 14 millivolts/degree/second	
Resonant Frequency — 85 cps	

Self Clearing HYDRAULIC SERVO VALVE



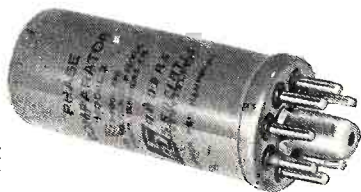
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Weight — Less than $1\frac{3}{4}$ lbs.	Flow — Up to 12 GPM
Size — $1\frac{1}{16}$ " x $2\frac{1}{16}$ " x $5\frac{1}{2}$ "	Pressure — Up to 3000 PSI
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Output — Up to 14 HP	External Leakage — None
Dirt Clearing Force — Up to 500 lbs.	Resolution — 0.03%
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PHASE
COMPARISON

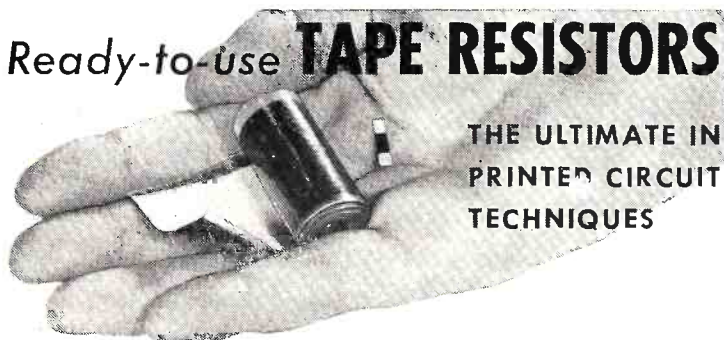
AMPLITUDE
COMPARISON

A well balanced hermetically sealed bridge for both phase and amplitude comparison. Utilizing two complete bridges with appropriate switching resistors, the phase comparator has a wide frequency range and high dynamic response. This permits its use as a modulator, demodulator, switch, rectifier or chopper. Having no moving parts, the Sanders Associates Phase Comparator is mechanically secure against shock acceleration and vibration. It has standard octal mounting and is mechanically interchangeable with mechanical choppers and electronic tube comparators.

GENERAL SPECIFICATIONS

Frequency Response — 0-5000 CPS	Amplitude — 60 DB
Maximum Reference Voltage — 120 Volts RMS	Conversion Efficiency — 85%
Maximum Signal Voltage — 60 Volts RMS	Maximum Ambient Temperature — +85 degree C
Dynamic Range (Fixed Reference Amplitude) — 46 DB	Mounting — Standard Octal Socket
Dynamic Range (Variable Reference)	Size — 1" Diameter x 3" Long
	Weight — 2 Ounces

Ready-to-use TAPE RESISTORS



THE ULTIMATE IN
PRINTED CIRCUIT
TECHNIQUES

An advanced technique in printed circuitry now makes available tape resistors for commercial and military applications. The flexibility of the Sanders Associates Tape Resistor permits this resistive component to be engineered into the initial printed circuit design. The Tape Resistor is sold in uncut tape rolls or as cured pre-cut resistors, in a wide range of performance characteristics which makes it suitable for a variety of printed circuit applications.

GENERAL SPECIFICATIONS (Precut Resistors)

Size — $\frac{1}{8}$ " Long, $\frac{1}{8}$ " Wide, $1/100$ " Thick	Humidity — 95% at 40 degree C for 24 Hours
Resistance Range — 100 Ohms to 10 Megohms	Temperature Coefficient — Within Requirements of JAN-R-11
Resistance Tolerance — Plus or Minus 10%	Shelf Life — 18 Months Minimum
Power Rating — $\frac{1}{8}$ Watt at +200 degree C	Load Life — 500 Hours Minimum $\frac{1}{4}$ Watt at 200 degrees C
Operating Temperature Range — Minus 55 degree C to plus 200 degree C	Voltage Coefficient — 0.035% per Volt

"The Minicube" SUBMINIATURE BLOWER



1 INCH LONG
1 INCH WIDE
1 INCH HIGH
OUNCE

DELIVERS
3 CU. FT./MIN.

OPERATES BETWEEN -200°C AND +200°C.

A truly subminiature blower designed for cooling or circulation of air for all subminiature applications. The universal mounting, negligible space and weight allow the "Minicube" to be used in almost any type of equipment. The hysteresis-type motor rotating at 24,000 RPM is designed for operation at temperatures up to +200° C. Models are also available for normal temperature operation (-55° to +85° C).

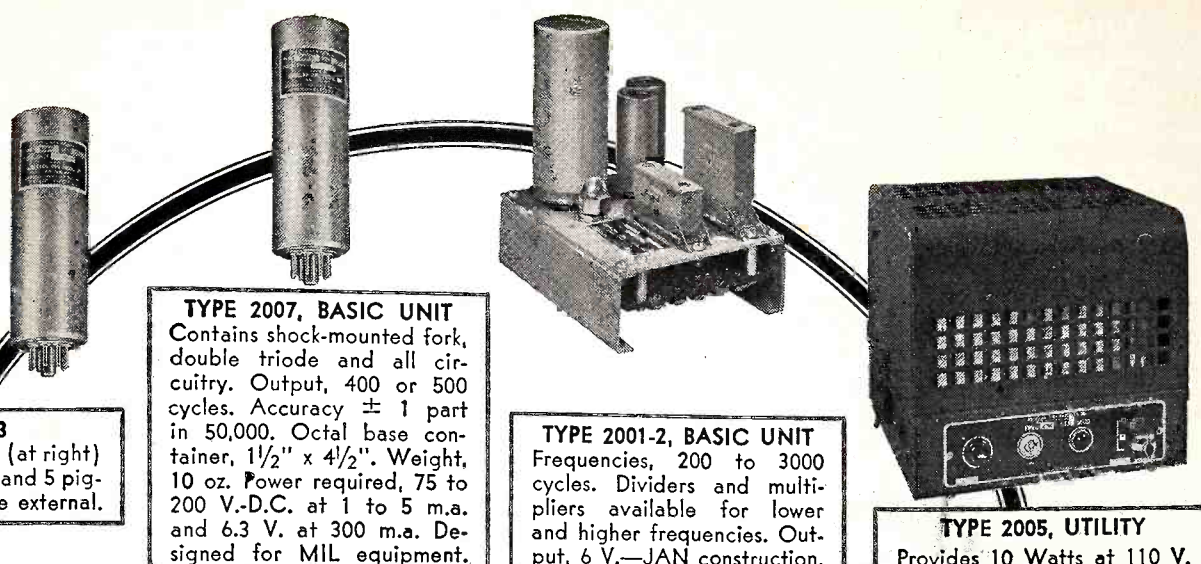
GENERAL SPECIFICATIONS (Model 2)

Size — 1" x 1" x 1"	Temperature Range — Minus 200° C Plus 200° C
Weight — 1 ounce	Expected Life — Over 1000 Hours
Capacity — 3 cubic feet per minute	
Power — 3 Watts, 400 Cycles, 6.3 Volts or 26 Volts	

SANDERS ASSOCIATES
INCORPORATED

137 CANAL STREET
NASHUA, NEW HAMPSHIRE
TELEPHONE: NASHUA 5570

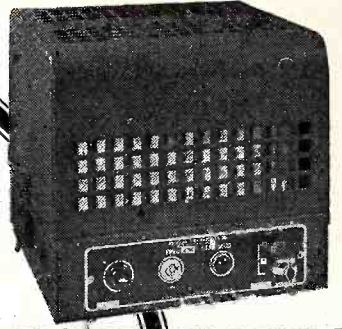
reliability in electronics



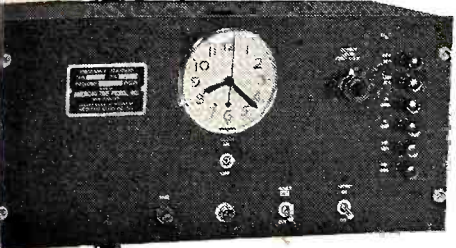
TYPE 2003
Same as Type 2007 (at right) except Tube 12AT7 and 5 pig-tail components are external.

TYPE 2007, BASIC UNIT
Contains shock-mounted fork, double triode and all circuitry. Output, 400 or 500 cycles. Accuracy ± 1 part in 50,000. Octal base container, 1 1/2" x 4 1/2". Weight, 10 oz. Power required, 75 to 200 V.-D.C. at 1 to 5 m.a. and 6.3 V. at 300 m.a. Designed for MIL equipment.

TYPE 2001-2, BASIC UNIT
Frequencies, 200 to 3000 cycles. Dividers and multipliers available for lower and higher frequencies. Output, 6 V.—JAN construction.



TYPE 2005, UTILITY
Provides 10 Watts at 110 V. Precision frequencies from 50 to 500 cycles. Input power, 50 to 500 cycles, 45 Watts.



TYPE 2121-A, LAB. STANDARD
Outputs, 60 cycles, 0-110 Volts, 10 watts; 120-240 cy. impulses. Input, 50-400 cycles, 45 Watts.



TYPE 2111A, POWER UNIT
50 Watt output. 0-110-220 V. at 60 cycles or any frequency 50 to 1000 cycles.

Precision FREQUENCIES

GUARANTEED ACCURACY
1 PART IN 100,000 (.001%)
except where otherwise noted

The basis of these frequency standards is an electronically actuated high-precision fork, temperature-compensated and hermetically sealed against barometric changes. The partial list of uses at the right not only suggests the broad range of applications but also proven dependability where there can be no compromise with accuracy. Please request details by Type No. Our engineers are available for advice or cooperation on related problems.

- WIDELY USED
IN SUCH FIELDS AS**
- Aviation, Navigation
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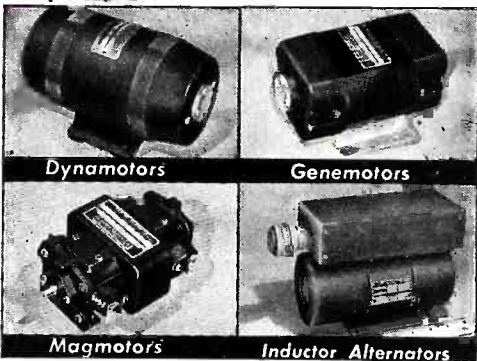


THE NEW

Custom

DC-AC CONVERTER

These latest of all Carter DC to AC Converters are specially engineered for professional and commercial applications requiring a high capacity source of 60 cycle AC from a DC power supply. Operates from storage batteries, or from DC line voltage. Three "Custom" models, delivering 300, 400, or 500 watts 115 or 220 V. AC. Wide range of input voltage, 12, 24, 32, 64, 110 or 230 V. DC. Unequalled capacity for operating professional recording, sound movie equipment and large screen TV receivers. Available with or without manual frequency control feature.



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- base terminals • socket terminals
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—POTTING

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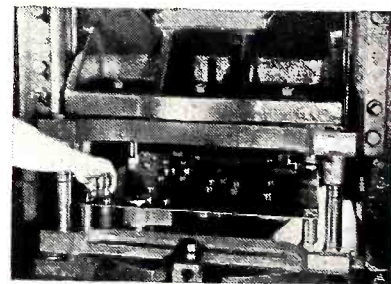
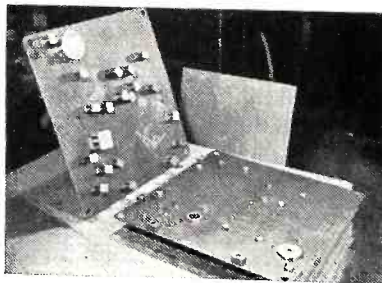
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ESTABLISHED 1938 • CEDAR GROVE, N. J.

Vector SOCKET-TURRETS

BACKGROUND FOR CIRCUITRY

Vector Socket-Turrets and Plug-In units provide a unique method for mounting electronic circuit components, saving space and increasing efficiency. Catalog numbers shown in bold face type are the most popular types.

OCTAL, MINIATURE and NOVAL SOCKET-TURRETS

Sockets are standard bottom mounting with steel saddles carrying 4 ground lugs. Body is mica-filled phenolic carrying wrap-around brass contacts, cadmium plated. Terminal posts are 1/2" O.D. with 1/16" wall, made of Grade XXXP laminated tan phenolic joined to socket. Six plated brass terminals at far end of turret plus three, six or none near socket. Mounting holes required are: for Octal 1" ctr. hole, side holes spaced 1-5/16" for 0.134" saddle holes (a larger type is also available—See 'A' below); for 7 pin miniature, 5/8" ctr. hole, side holes spaced 7/8" for 1/8" saddle holes; for 9 Pin Noval, 3/4" ctr. holes, side holes spaced 1 1/8" for 1/8" saddle holes.

Catalog Numbers			Height	Description
10-O-12T	10-MB-12T	10-NB-12T	2 1/2"	12 term. in 2 rings spaced 1 3/8"
10-O-9T			2 1/2"	9 term. in 2 rings spaced 1 3/8"
8-O-12T	8-M-12T	8-N-12T	2"	12 term. in 2 rings spaced 1"
8-O-9T	8-M-9T	8-N-9T	2"	9 term. in 2 rings spaced 1"
6-O-6T	6-M-6T	6-N-6T	1 1/2"	6 term. in 1 ring only
	S7	S9		Shield Base for attaching shields

Height measured from chassis to far end of turret.

For variations not always available from distributors but obtainable at the factory:

- Add 'A' to No. for large octal socket (1 1/2 Mtg. Ctrs., 1 1/8" hole).
- Add 'J' to No. for 'MFE' socket casting, beryllium contacts, silver plated, hot tin dipped.
- Add 'U' to No. for 4-40 U nuts which slip on saddle for easy mounting.
- Add 'C' to No. for impregnation of turret for moisture and fungus protection.
- Substitute 'L' for 'O' in No. if loctal socket required, (1-1/16" hole, 1-5/16" mtg. ctrs.).

Note: Letters are printed on all above turrets to indicate terminal positions. A-F inclusive appear on remote end, G-L inclusive on row near socket (H, J, L for 3 terminal rows). "A" and "C" over "1" of socket. Socket-Turrets are covered by Patent Nos. 2,604,584 & 2,624,775.

SADDLE NUTS: A 'U' type nut which slips over standard socket saddles has been especially designed to promote easy mounting on the chassis. For #4-40 machine screws. Order as #440-U nut or simply add 'U' to number of socket ordered.

TEST ADAPTERS

Vector Test Adapters are ideal for making measurements from the tube side of electronic equipment, where it is inconvenient to reach into the wiring compartment. The adapter is simply inserted between tube and socket completing the circuit and providing test tabs connecting with tube elements.

The T-789 set combines the 7-pin and 9-pin miniatures and octal in a plastic case. Or adapters may be obtained separately as follows:

Catalog No.	Tube Type	Body Dia.	Skirt Dia.	Length less Prongs	Lead Shielding
T-7-M	7 Pin Min.	0.74"	1.03"	1.47"	None
T-8-O	8 Pin Octal	1.26"	1.56"	1.50"	None
T-9-N	9 Pin Noval	0.87"	1.16"	1.47"	None
T-789 Set of above three types in case (1.75" x 3.75" x 2.62")					

TUBE BASE PLUGS

These plugs fit the 7 and 9 pin miniature sockets and are useful for many experimental or plug-in purposes.

Cat. No.	Type	Dimensions (Fig. 1)								Retainer Ring No.
		A	B	C	D	E	F	G	H	
P7	7 Pin Min.	1 1/8"	17/32"	5/16"	.291	3/16"	.621	.568	.126	None
P9	9 Pin Noval	1 1/8"	17/32"	5/16"	.291	3/16"	.748	.700	.126	None

Vector Electronic Company

3352 SAN FERNANDO RD., LOS ANGELES 65

WRITE FOR COMPLETE CATALOG

8-M-12T

6-M-6T

WIRED UNIT

440-U NUT

10-NB-12TU

10-O-12TU

S7

S9

TEST ADAPTERS

P7

P9

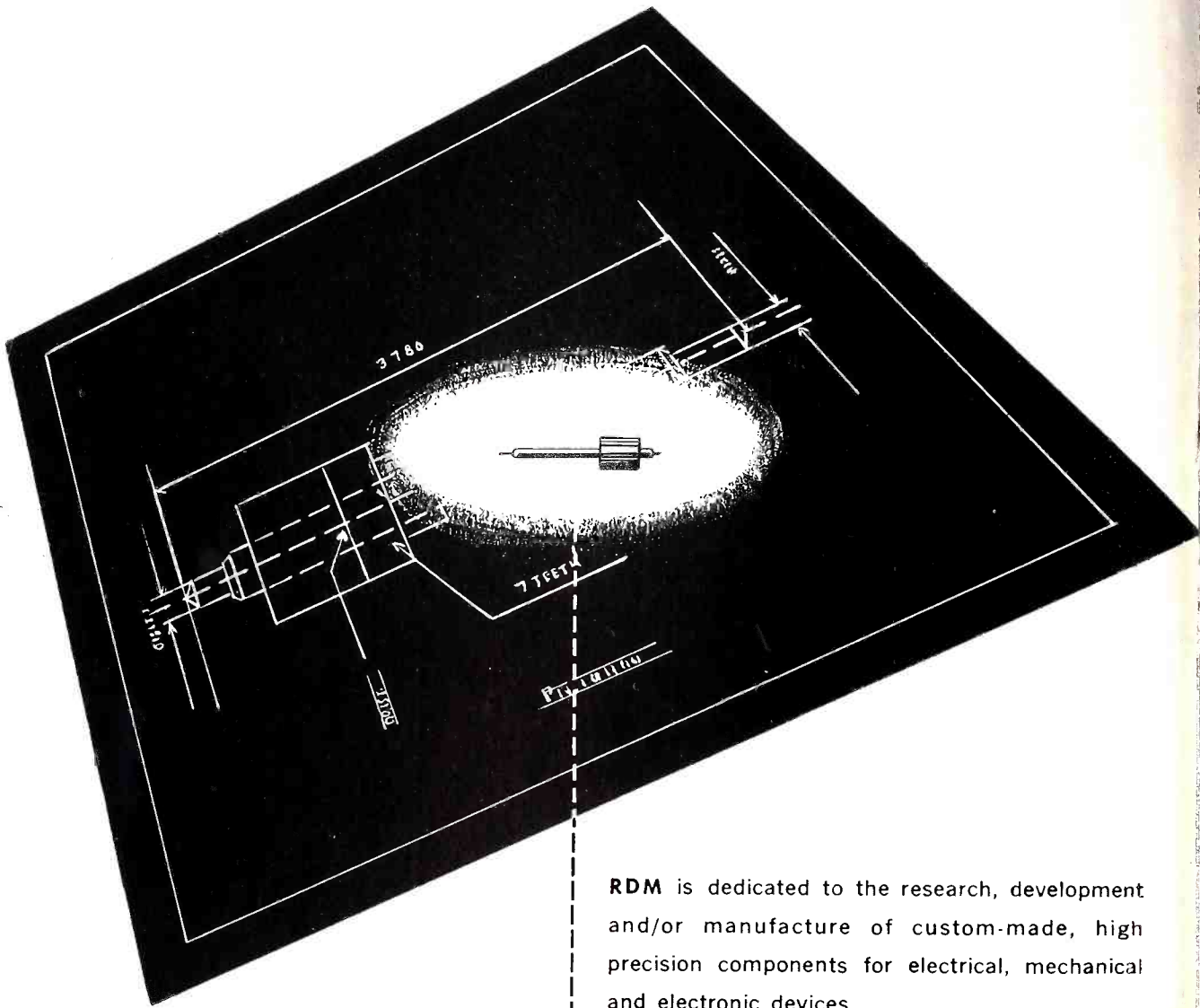
FIG 1

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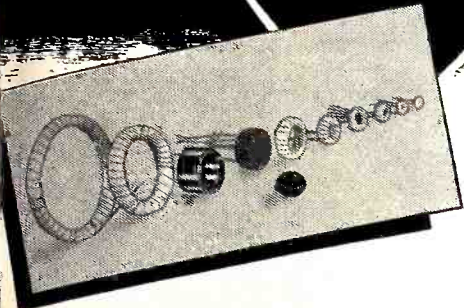
Production schedules assured.
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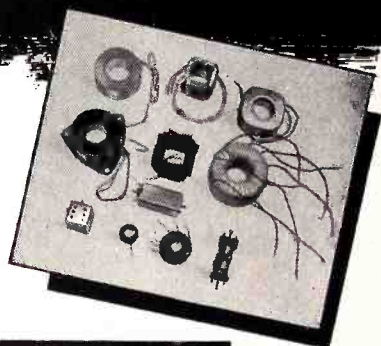
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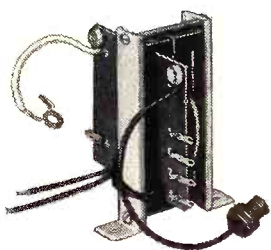


**TOROID
COILS**

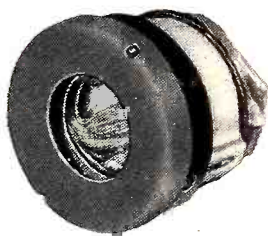
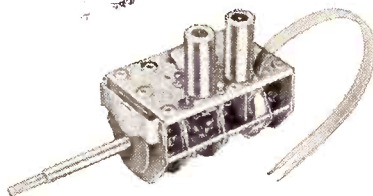


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TRANSFORMERS



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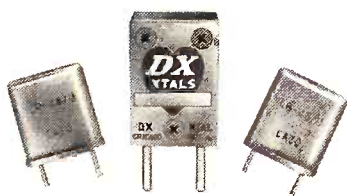


**DEFLECTION
YOKES**

ION TRAPS



CRYSTALS

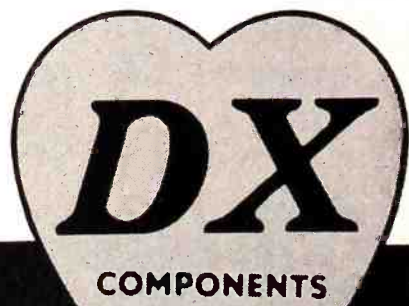


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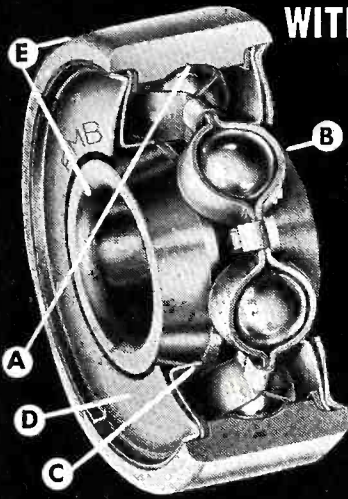
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GENERAL OFFICES: 2300 W. ARMITAGE AVE., CHICAGO 47, ILL.

MINIATURE BALL BEARINGS

WITH 'BIG BEARING' CONSTRUCTION



When you use RMB miniatures in instruments and small mechanisms, you get engineering features which you expect to find only in anti-friction bearings of much larger size. For example, RMB Type RF FILMOSEAL bearing (illustrated) has these important design details:

- A—Deep groove races, uninterrupted by filling slot.
- B—Balanced, two-piece ball retainer.
- C—Non-rubbing capillary oil seal.
- D—Dust shield.
- E—Precision tolerances.

In the manufacture of all RMB bearings, no matter how small, there is never any compromise with the principles of good bearing design.

Over 250 RMB Types and Sizes

<p>PIVOT Self-aligning</p>		<p>The simplest and most compact of the miniature types. Use them where size, weight and cost must be kept low, yet where you want the low friction and greater endurance of a ball bearing. <i>Typical applications:</i> Meter movements, small gear trains, lever pivots. <i>Sizes:</i> From .043" to .423" O.D.</p>
<p>ANGULAR CONTACT Self-aligning with inner race</p>		<p>Similar in capacity and application to the pivot types, but somewhat easier to install because they take cylindrical shafts. These types, as well as the pivot types, are self-aligning, will carry thrust and radial loads. <i>Sizes:</i> From .157" to .787" O.D.</p>
<p>RADIAL Without inner race</p>		<p>Particularly useful where loads are relatively light, low starting torque and high shock and wear resistance are important. <i>Typical applications:</i> Pivots for balance arms; shaft supports in control and recording mechanisms. <i>Sizes:</i> From .1181" to .4724" O.D.</p>
<p>RADIAL Deep Groove with inner race</p>		<p>These Conrad type precision ball bearings, with deep groove design and balanced ball retainer, provide maximum load capacity, high running speeds, long life. <i>Typical applications:</i> Small motors, sound recorders, computers, potentiometers. <i>Sizes:</i> From .1181" to .8661" O.D.</p>
<p>OTHER TYPES</p>		<p>MANY SPECIAL TYPES AND DESIGNS NOT SHOWN HERE ARE ALSO AVAILABLE IN A WIDE RANGE OF SIZES. WRITE FOR COMPLETE CATALOG, WHICH INCLUDES A DISCUSSION OF DESIGN PROCEDURE FOR BALL BEARING SELECTION.</p>

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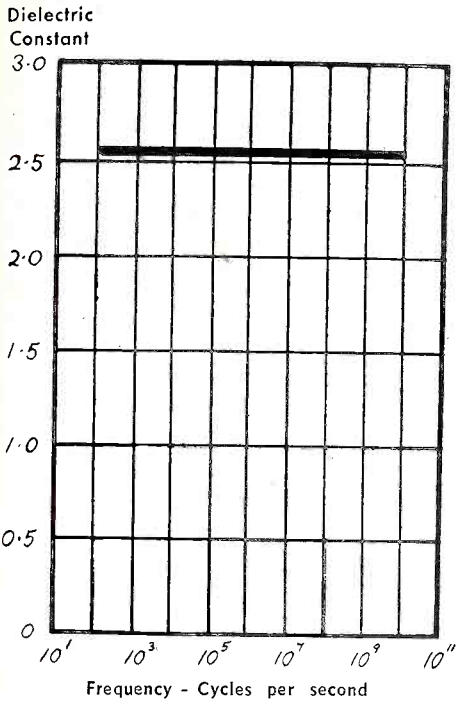
GUIDE

**By the
electronic
industry
itself...*

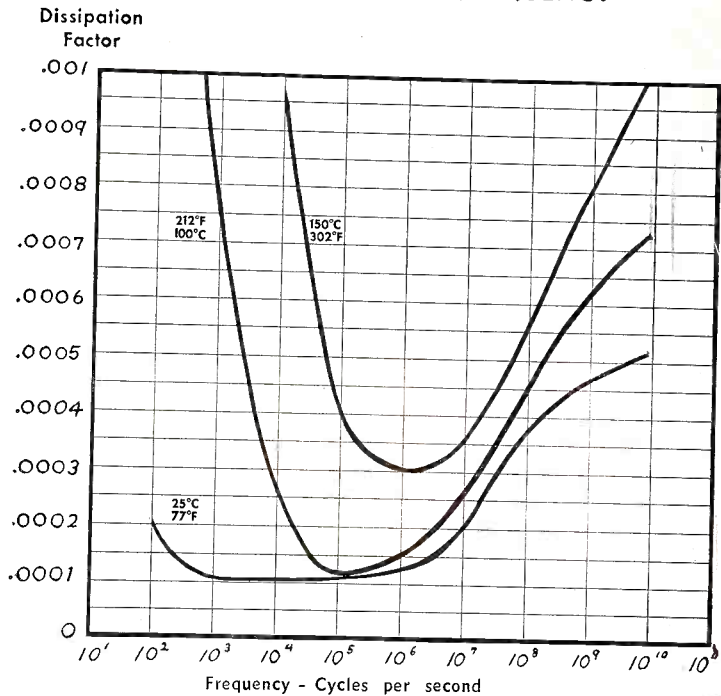
THE REMARKABLE PERFORMANCE

of REXOLITE 1422

DIELECTRIC CONSTANT VS FREQUENCY



DISSIPATION FACTOR VS FREQUENCY



DISSIPATION FACTOR — EXTREMELY LOW OVER ENTIRE R.F. & U.H.F. RANGE
DIELECTRIC CONSTANT — NO CHANGE WITH FREQUENCY

This wonderful insulation performance coupled with a high heat distortion point (105°—113°C) and the resulting good machinability make Rexolite 1422 an amazing High Frequency insulation. It equals or excels all but a few of the fine qualities of the much more expensive fluorocarbons. Even in the "few," it is superb in its own right and very close to the fluorocarbons — as

in the case of Dielectric Constant shown in the above chart.

Rexolite 1422 is a carefully controlled cross-linked polystyrene. Developed by two of the country's greatest laboratories and manufactured for 10 years, Rexolite 1422 is highly dependable in quality, uniformity and performance.

If you have RF or UHF insulating problems calling for sheets, rods, castings or imbedments, check Rexolite 1422. We welcome problems. Write to us for information, full size copies of the above charts and technical bulletins.

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Manufacturers of UHF Insulating Materials, Microwall Wire** Kel-F* insulated wire, other Wire Specialties, Rextrude** 105 Electrical Tubing and Custom Plastic Extrusions.
West Acton, Massachusetts, U.S.A.



* T.M. of M. W. Kellogg Co.
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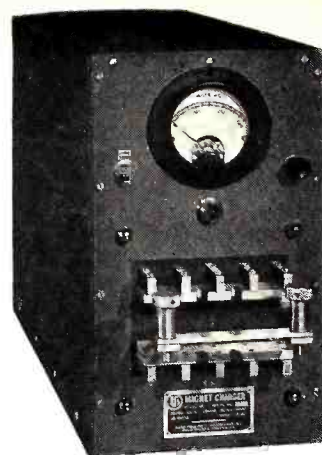


Est.  1922

HERE'S HOW: Each Sealnut* has three parts — black Silicone cap, nickel-plated brass nut, and Silicone O-ring. The nut bears against the control panel for mechanical rigidity and is pressure sealed by the O-ring. The cap seals switch shaft. Sealnuts have operated without leaking at external hydraulic pressures of 200 lbs./in. They remain flexible to -65°C , meet operating and service life requirements of Spec. MIL-B-5423 and are approved by U. S. Air Force, Navy and Signal Corps.

HOW TO ORDER: Tell us what switch you want to seal, and we'll send Sealnut data, samples and price list.

*U. S. Patent 2462023



Model 107
Weight: 75 lbs.
Size: 12 x 7 x 7
Operates on 115 volts 60 cycles, uses 15 watts

HOW TO CHARGE MAGNETS Safely and Quickly—

Fig D The Model 107 Magnet Charger will charge any shape or kind of permanent magnet saturable by a 20,000-ampere charging current. Design of end permits use of special adapters in addition to bar and I-conductor provided with unit. Special wound fixtures may also be used for charging type and ring magnets.

Hundreds of these Chargers are in daily use throughout industry, in laboratories, instrument and airline maintenance shops, and among government services. The unit is self-contained, simple to operate; all exterior parts can be handled during complete charging cycle without danger to operator. Rugged and designed for production charging, average magnetizing cycle under 5 sec. Net price \$105.

Fig E The Model 206 Booster Unit connects between Model 107 and power source, increasing charging current 30%. Net price \$49.75.



Fig I Type HA-5371 Handle with mounting Swings 180°. Conforms to MIL-T-945A. Made of black anodized aluminum, gripping area coated with black vinyl. Grip feels warm and comfortable. Price \$1.85 ea.

CRYSTAL TESTING EQUIPMENT

These three crystal impedance meters were specifically designed to test quartz crystals per MIL-C-3098. They are used to determine equivalent electrical parameters, such as load capacity, effective resistance, series capacitance and inductance. From these parameters the crystal's performance index can be calculated. Units operate from 105/115 volt 50/1720 cycle source and fit a standard relay rack. Panels measure 7 x 19.

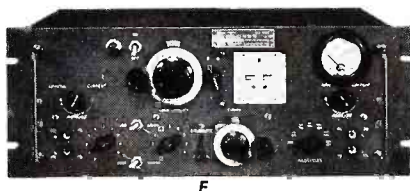
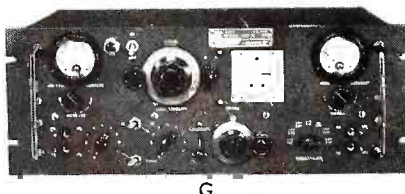


Fig F The Model 460 (TS-537/TSM) C. I. Meter tests quartz crystals in the frequency range of 75 to 1100 kc. Three resistance ranges are calibrated: 0 to 990 ohms, 0 to 9,900 ohms and 0 to 99,000 ohms. Load capacitance from 12 to 110 uuf. Net \$520.

Fig G The Model 459 (TS-330/TSM) C. I. Meter is used for crystals in the frequency range of 1 to 15 mc. Two resistance calibration ranges are available: 0 to 99 ohms and 0 to 9,900 ohms. Load capacitance calibrated from 12 to 110 uuf., using calibration chart. Net \$560.



G

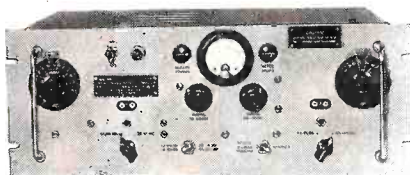


Fig H The Model 531 (TS-683/TSM) C. I. Meter tests crystals in the frequency range of 10 to 140 mc. Twelve calibrating resistors of 10, 22, 30, 40, 51, 60, 68, 82, 91, 100, 120, and 150 ohms, plus a 100-ohm variable resistor are used for resistance calibration. Net \$550.

H

INSTRUMENT CALIBRATION STANDARDS



Fig J Model 261B Standards calibrates AC meters to 0.5% thru ranges of 10 millivolts to 1500 volts and 1 microampere to 200 amperes. Uses Weston Mod. 341 and 370. Electronic generator provides 50/1600 cycles test voltage, controlled sine wave. Operates on 105/125 volts, 50/1600 cycles, w/internal voltage regulator. Price \$9250.

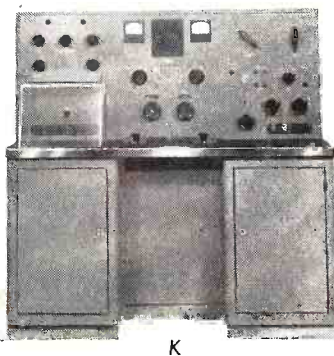


Fig K Model 262B Dual Potentiometer Standards for calibrating meters to 0.1% thru a range of 1 millivolt to 1500 volts and 1 microampere to 150 amperes. Uses L & N Brooks Mod. 7 pot. and Weston Mod. 4 standard cells. Voltage and current ranges separate for calibration of watt meters. Operates on 105/125 volts, 50/1600 cycles, 350 watts, with internal voltage regulator. Interlocks and hood protect instrument under test and operator from accidental overloads. Price \$14,300.

K



Fig L Model 260B Standards calibrates DC meters to 0.5% thru ranges of 1 millivolt to 1500 volts and 1 microampere to 150 amperes. Uses special Weston precision voltmeter and ammeter. Operates on 105/125 volts, 50/1600 cycles, with internal voltage regulator. Price \$8770.

L

All prices are FOB Boonton, N. J. and subject to change without notice.

RADIO FREQUENCY LABORATORIES, INC.
Boonton 2, New Jersey

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AC PREAMPLIFIER



DC CONVERTER—for low level DC recording such as thermocouple output.



TRIPLEXER—when coupled to a DC amplifier permits the recording of three events in one channel.



THRESHOLD MONITOR provides means for the control of voltage levels or rate of change.



DC (General Purpose) AMPLIFIER



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SERVO MONITOR AMPLIFIER—a phase discriminating AC amplifier used in servo design and testing.

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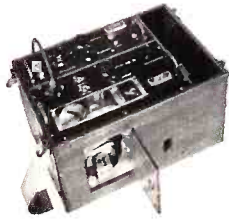
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One channel Model 128/141 above and two-channel Model 60 at right both incorporate Sanborn recording advantages which include interchangeability of amplifiers and (with Model 60) preamplifiers.

SANBORN
1-, AND 2-CHANNEL
RECORDING
SYSTEMS



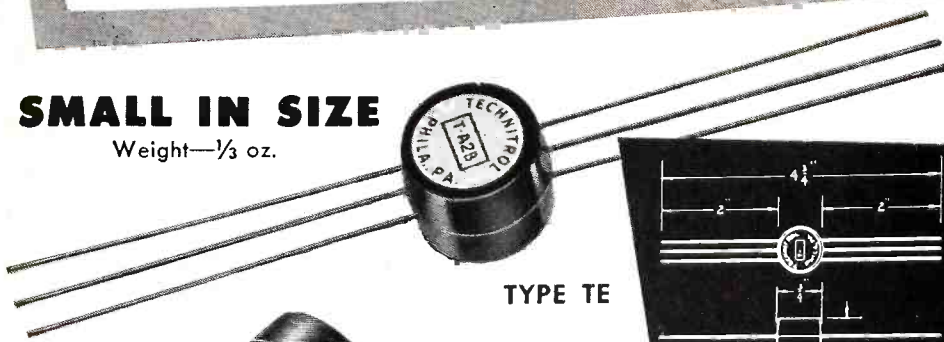
encapsulated

PULSE TRANSFORMERS

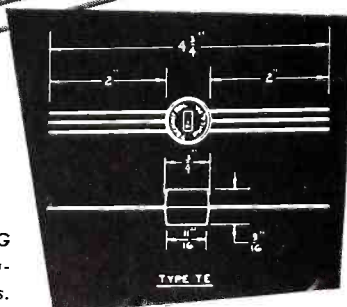
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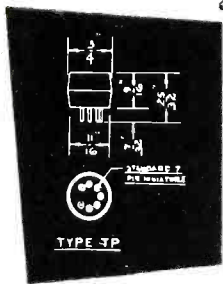
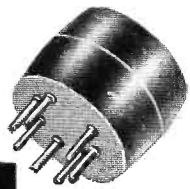


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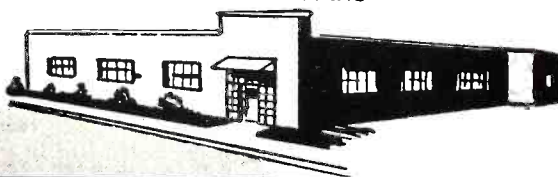
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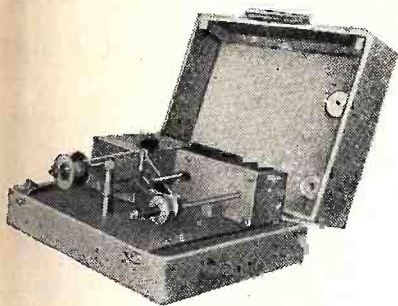
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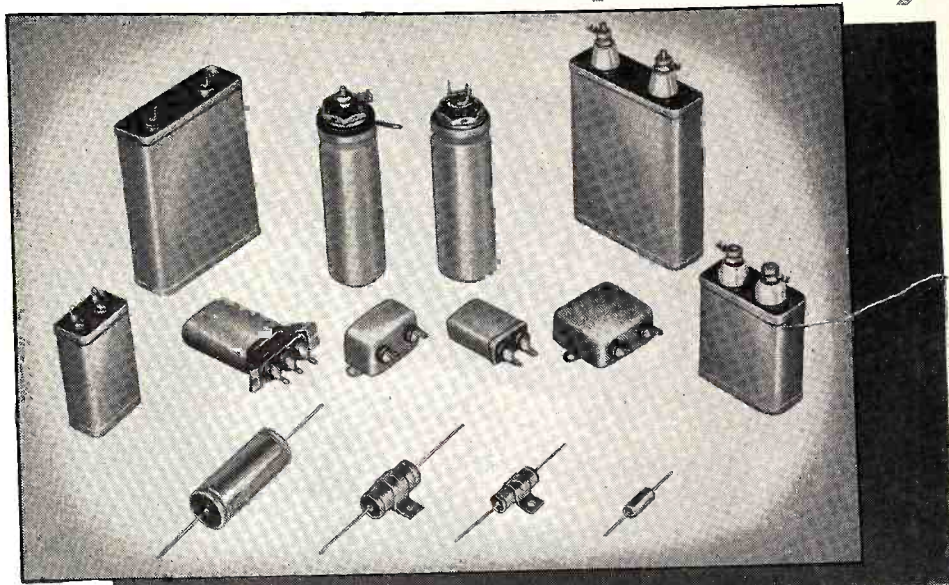
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Conductor	{ Aluminum Foil, Tin-Lead Foil, Metalized Paper, Metalized Plastic, Copper Foil.
Case	{ Metal tubular, Bathtub, Deep drawn, Fab. case solder seam, Welded tank, Glass tubular, Paper tubular, Uncased.
Terminals	{ Compression-type phenolic, Steatite standoff bushing, Silicone rubber, Glass seal, Glass, Teflon, Neoprene, Glass tubular.
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50 ohms impedance; pulse
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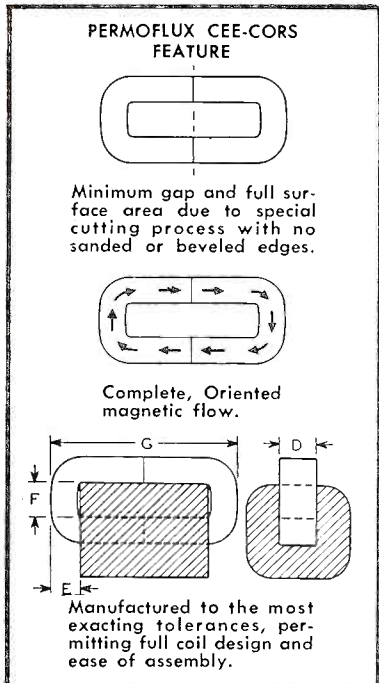
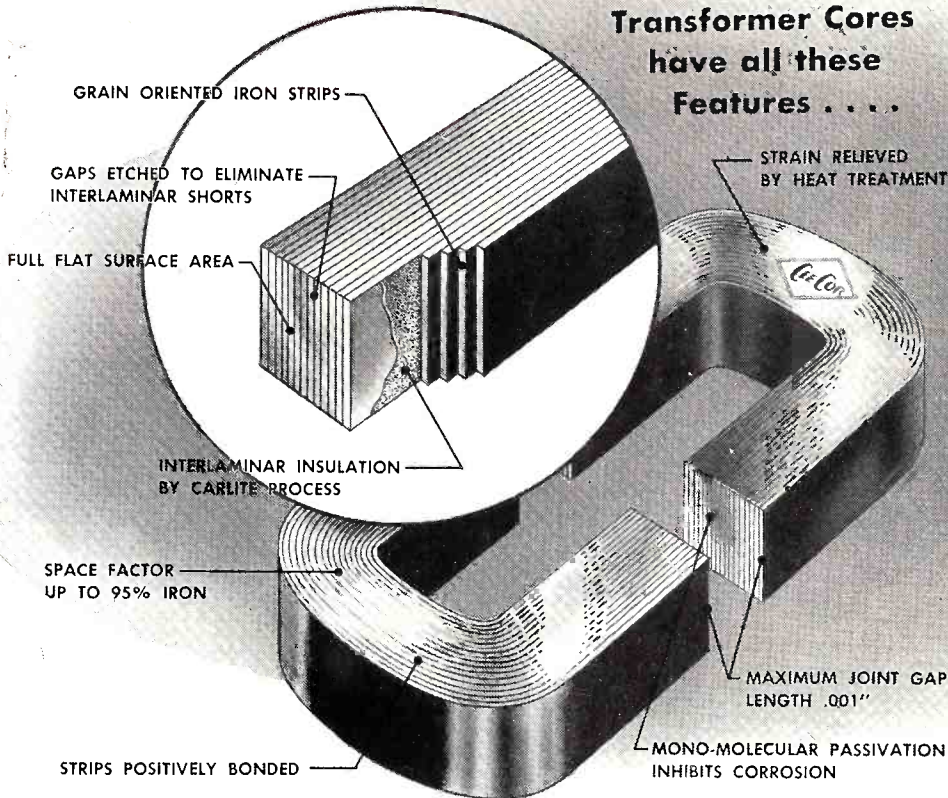
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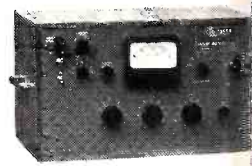
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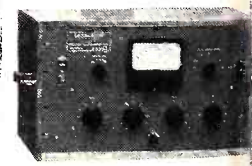
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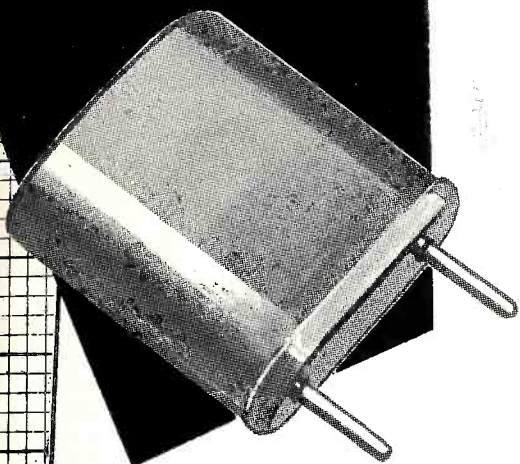
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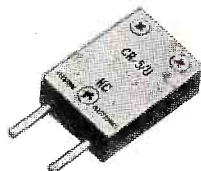
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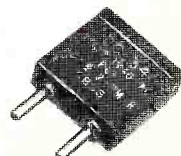
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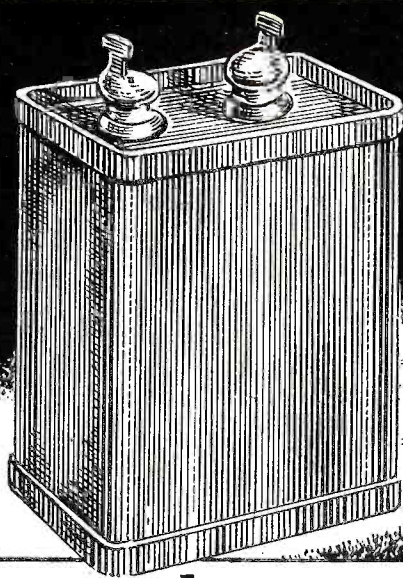


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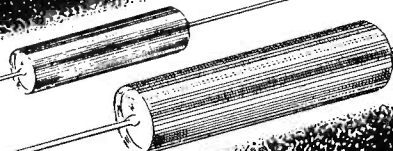
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capacitors

Optimum Solution



unicon Polystyrene Capacitors

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Unicon Type D capacitors employ a newly developed plastic resin film as a dielectric.

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Unicon always gives your capacitor problems the Optimum Solution.

POLYSTYRENE LISTING

Cat. #	Cap.	WVDC	Style Housing	Dimensions
A1-1-	50	.05	100	1 1-1/2" Lx1/2" D
A1-1-	100	.10	100	1 1-1/2" Lx3/4" D
A3-1-	250	.25	100	3 1"x1-13/16"x1 H
A2-1-	500	.50	100	2 1-1/16"x1-13/16"x1-5/8" H
A2-1-	1000	1.00	100	2 1-1/16"x1-13/16"x2-3/4" H
A1-3-	1	.001	300	1 1-1/2" Lx1/2" D
A1-3-	2	.002	300	1 1-1/2" Lx1/2" D
A1-3-	5	.005	300	1 1-1/2" Lx1/2" D
A1-3-	10	.01	300	1 1-1/2" Lx1/2" D
A1-3-	20	.02	300	1 1-1/2" Lx1/2" D
A1-3-	50	.05	300	1 1-1/2" Lx3/4" D
A1-3-	100	.10	300	2 2-1/2" Lx3/4" D
A2-3-	250	.25	300	2 1-1/16"x1-13/16"x2-1/4" H
A2-3-	500	.50	300	2 1-1/16"x1-13/16"x3-1/4" H
A2-3-	1000	1.00	300	2 1-1/4"x2-1/2"x3-1/2" H
A2-3-	2000	2.00	300	2 1-1/4"x3-3/4"x3-3/4" H
A2-3-	5000	5.00	300	2 3-3/4"x4-9/16"x3-3/8" H
A2-3-	10000	10.00	300	2 3-3/4"x4-9/16"x5-1/8" H

TYPE D LISTING

Cat. #	Cap.	WVDC	Style Housing	Dimensions
D3-2-	500	0.5	200	3 1"x1-13/16"x3/4" H
D3-2-	1000	1.0	200	3 1"x1-13/16"x3/4" H
D3-2-	2000	2.0	200	3 1"x1-13/16"x1" H
D2-2-	4000	4.0	200	2 1-1/16"x1-13/16"x2-1/4" H
D2-2-	6000	6.0	200	2 1-1/16"x1-13/16"x2-7/8" H
D2-2-	8000	8.0	200	2 1-3/16"x2-1/2"x2-7/8" H
D2-2-	10000	10.0	200	2 1-3/16"x2-1/2"x3-1/2" H
D3-4-	500	0.5	400	3 1"x1-13/16"x3/4" H
D3-4-	1000	1.0	400	3 1"x1-13/16"x1" H
D3-4-	2000	2.0	400	3 2"x1-3/4"x1" H
D2-4-	4000	4.0	400	2 1-3/16"x2-1/2"x2-7/8" H
D2-4-	6000	6.0	400	2 1-3/16"x2-1/2"x4-3/4" H
D2-4-	8000	8.0	400	2 1-1/4"x3-3/4"x4-3/4" H
D2-4-	10000	10.0	400	2 1-3/4"x3-3/4"x4-3/4" H
D3-6-	500	0.5	600	3 1"x1-3/4"x1" H
D2-6-	1000	1.0	600	2 1-1/16"x1-13/16"x2-1/4" H
D2-6-	2000	2.0	600	2 1-3/16"x2-1/2"x2-7/8" H
D2-6-	4000	4.0	600	2 1-1/4"x3-3/4"x3-1/4" H

NOTES:

- Style 1 is hermetically sealed glass tube with metal end caps.
- Style 2 is hermetically sealed rectangular metal can. See JAN C-25 drawings of CP 70 cans for outline drawings.
- Style 3 is hermetically sealed metal "bathtub" cans. See JAN C-25 drawings of CP 53 cans for outline drawings.
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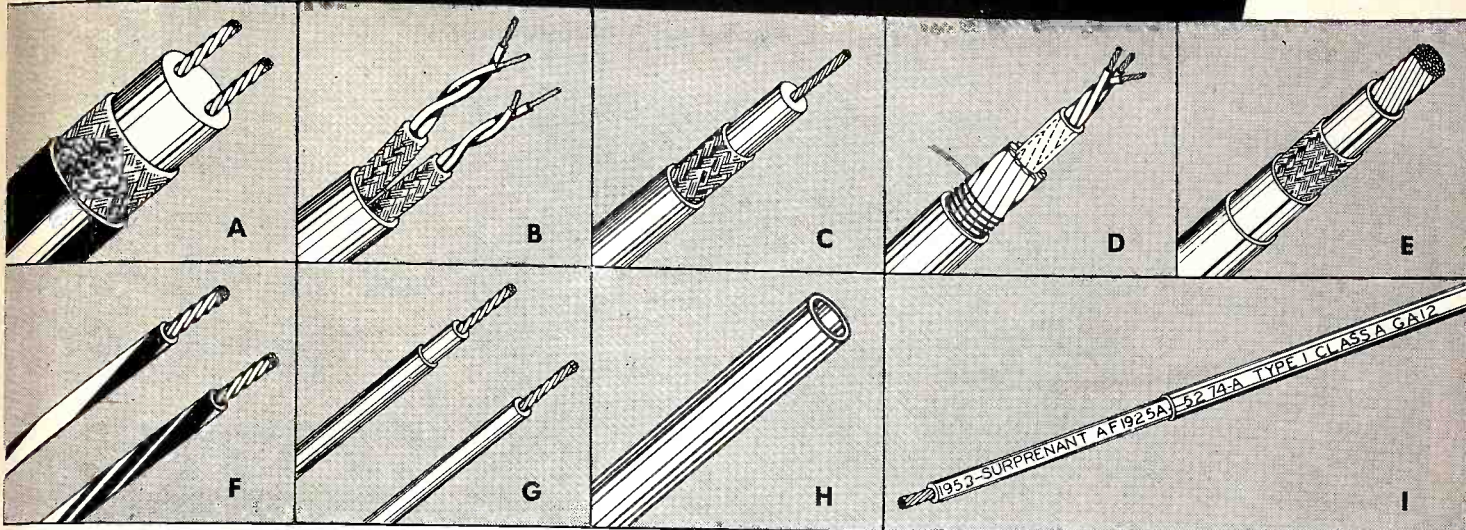
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OPERATING TEMPERATURES FROM -60°C TO 210°C

SIZES FROM 32 TO 4/0



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B Miniature Wire & Cable—“Surco” miniature wire and cables are made in conductor sizes down to No. 32 AWG in stranded and solid. Close control in manufacturing permits small finished diameters on both single and multi-conductor cable. Available in standard colors with and without nylon jacket or shielding in the various vinyl or polyethylene compounds.

C “Surflene” Insulated Hook-up Wire—“Surflene”, extruded monochlorotrifluoro-ethylene, has excellent resistance to heat, abrasion, and most chemicals, including nitric acid. Having high dielectric strength and insulation resistance, it is especially useful in totally enclosed applications with continuous temperatures up to 135°C . “Surflene” is available in 15 solid colors and wall thicknesses down to 0.008”. “Spiralon” colors presently under development.

D Multi-Conductor Cables—“Surprenant” multi-conductor cables are available with conductor sizes from No. 32 AWG and larger, with or without nylon jacket or shielding and can be made to specification for special design and applications. Close tolerances permit unusually small overall diameters and “Spiralon” color coding permits easy identification even when hundreds of conductors are involved.

E New Improved Aircraft Wire—Surprenant new lightweight, smaller diameter MD wire (vinyl-glass braid-nylon) and the standard Surprenant sandwich construction (vinyl-glass braid-vinyl-nylon) give excellent overload safety, high and low temperature performance, good electrical properties and have a nylon jacket giving greater resistance to abrasion, fungus, moisture, hydraulic and other oils (nylon braided jacket on sizes 10 AWG and larger for greater flexibility) and are made to conform to MIL-

W-5086. “Surprenant” also offers nylon jacketed—polyvinyl-chloride construction made to conform to Military Spec. AN-J-C-48A.

F “Spiralon”—“Surco-Spiralon” color coding is available on all vinyl, polyethylene, and nylon insulated wires, with or without nylon jackets. One, two, or three color stripes are available in the standard Nema colors providing almost unlimited color identifications.

Solid color insulation is also available in the 10 standard Nema colors.

G “Surco” A-10 For (105°C) Hook-up Wire—A-10 is an unusually high grade vinyl insulating compound developed in our own laboratories for a better hook-up wire. It has excellent resistance to deformation, soldering, high temperature, low temperature and aging; high electrical properties; Underwriters Lab. approved for continuous operation to 105°C without fibrous covering. A-10 insulated wire made to conform to MIL-W-16878.

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I MIL-W-5274A Radar & Electronic Hook-up Wire—Made to conform to Air Forces Spec., this wire offers excellent low temperature performance. Nylon jacketed, it has high abrasion resistance and superior surface resistivity even under adverse humidity conditions, making it very adaptable for high impedance circuits.

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INSULATED (210°C)
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Surprenant

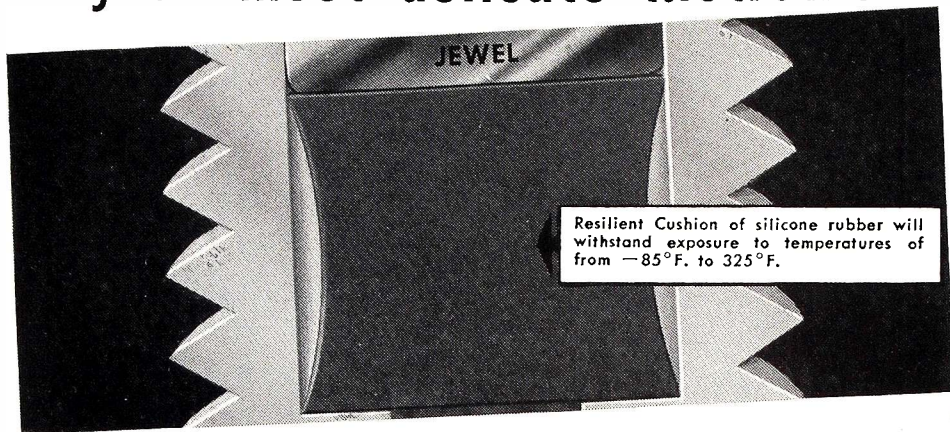
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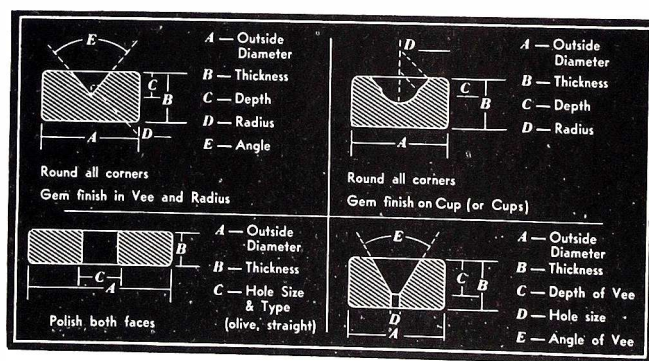
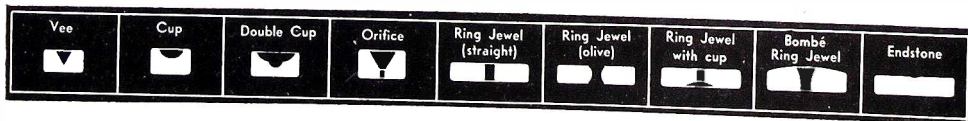


Chart shows four types of jewels commonly used, with dimensional specifications to customize each type for your production. Specify quantity, type, dimensions, and whether desired unset or set in screws or bushings. We will quote prices and deliveries or provide samples to your specifications.

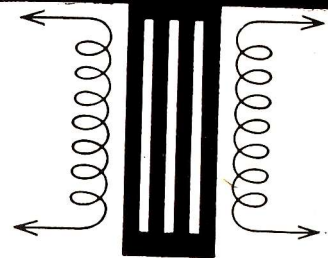


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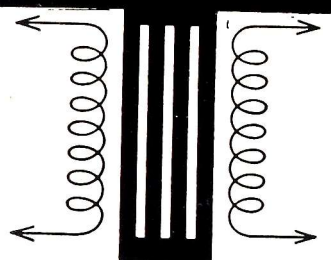
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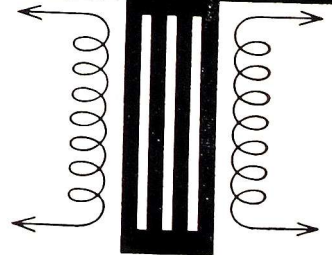


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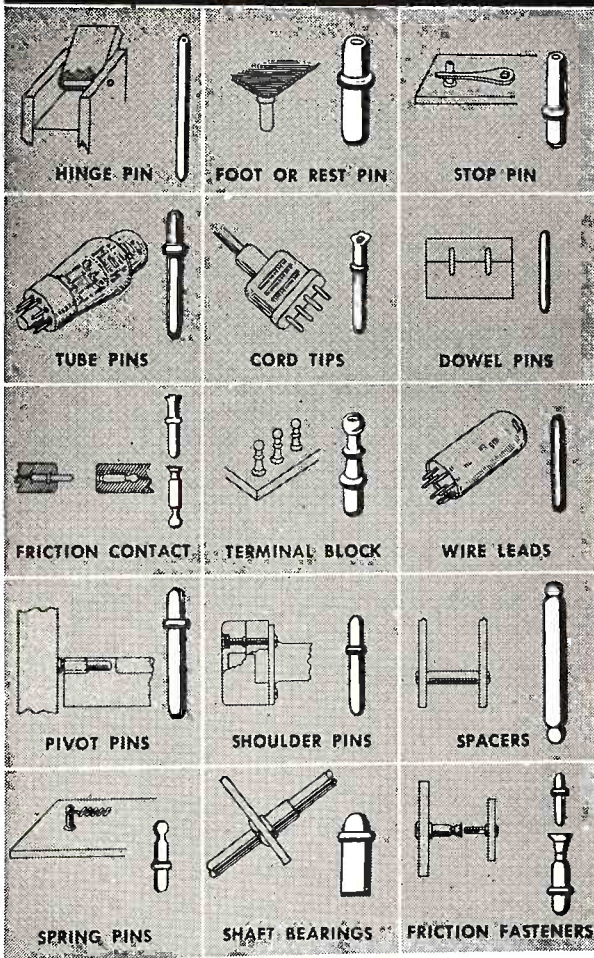
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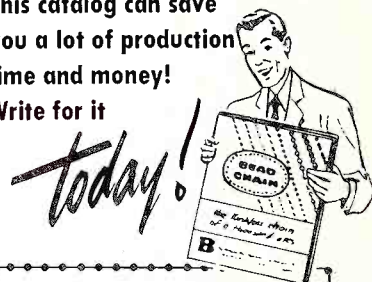
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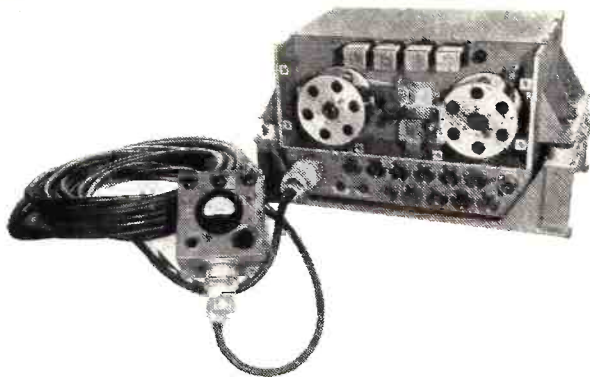
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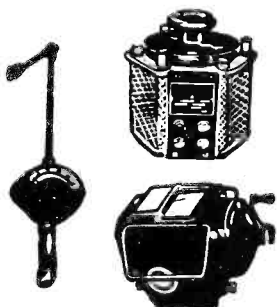
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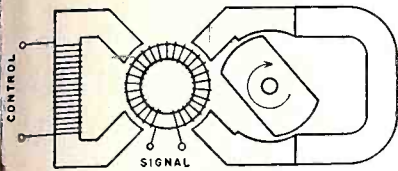
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Model 1435 Variable Frequency Electronic Generator

Frequency Range: 50-6000 cps in 4 ranges
Frequency Control: Single dial, direct reading, linear scale in 4 ranges: 50-180; 170-600; 540-1800; 1700-6000 cycles.

Power Output: Nominal rating 2,200 w continuous duty.

Output Voltage: The controlled output voltage is continuously adjustable from 40 volts to 140 volts. Normal performance is considered at the 120 volt RMS output where the change in output voltage from no load to full load of 2200 watts will not exceed 2%.

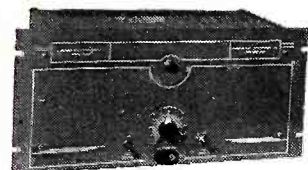
Waveform: The waveform varies slightly from no load to full load. At full load, the distortion is less than 7%.

Power Supply: Any 60 cycle single phase source between 208 and 260 volts capable of carrying a 5Kw. load with good regulation. A tapped auto transformer is provided to take care of this range of input voltages.



Model 1430 Electronic Generator

Similar to Model 1435 except power output is 1400 watts. Power input 3500 Watts.



Model 1100-1110 Electronically Regulated Power Supplies

Power Source: 110-115-125 volts, 50-60 cycles.

D.C. Power Output: 200 ma from 225 volts to 300 volts. 180 ma from 300 volts to 320 volts.

Total noise content in output is less than 5 millivolts. Regulation: less than 1 volt change from no load to full load. Unregulated heater supply 6.3 volts at 5 amperes.

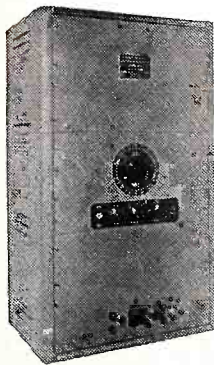
Model 1130 Regulated Power Supply

Power Input: 105 to 125 volts, 60 cycles.

D.C. Output: 210 volts to 310 volts 0 to 400 ma.

Regulation less than 1% from no load to full load at 310 volts. Below 270 volts at any load, or below 300 ma. load at any voltage, regulation is better than 1 volt.

Total noise content in output does not exceed 10 millivolts at 310 volts-400 ma. at any load below 270 volts or at any voltage below a 300 ma. load noise output is less than 5 millivolts.



Model 1420 Variable Frequency Electronic Generator

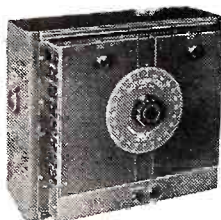
Frequency Range: 50-6000 cycles in 4 ranges. 50-180; 170-600; 500-1800; 1700-6000 cps.

Power Output: 300 watts continuous duty. Maximum distortion at full output into resistive load less than 5%.

Regulation no load to full load within 2%.

Nominal regulated voltage output 80-120-135-215-255 or 270 volts.

Power input 115 volts 60 cycles 1 Kw.



Model 1010 Rotobridge

Automatic Inspector For Production Line Testing.

Checks equipment for opens or shorts in wiring. Checks tolerance of resistors at 5%, 10% or 20% as required.

Resistance Test Range: 200 ohms to 2 megohms at 5%. Tests smaller and

larger values at 10%.

Tests one circuit per second, up to 119 circuits in one cycle. PROVIDES NUMERICAL indication of every defective circuit.

Model 1210B Stroboscope

Stroboscope lamp mounted in small probe.

Range 480 to 60,000 rpm in 4 ranges individually calibrated on fundamentals 80-1000 cycles.

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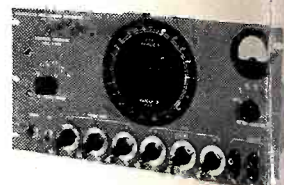
Accuracy of reading better than 1%.

Overall maximum departure from calibration less than 3%.

Power Supply requirements: 105-125 volts, 50-60 cycles



Model 1440 Three Phase Oscillator



Model 1440: Three Phase Oscillator Frequency Range 17000 cycles. One, two or three-phase output. Phase relationship of all phases adjustable through 360 degrees

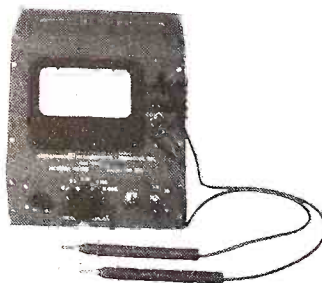
Model 1135 Regulated Power Supply

Power Input: 105-125 volts 50-60 cycles.

Output #1: 0-200 ma from 0-170 volts; 160-300 volts in two ranges. Noise less than a millivolt.

Output #2: Regulated "C" bias 0-100 volts.

Output #3: Unregulated 6.3 volts 5 amp. ac.



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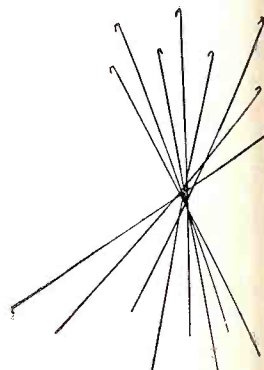
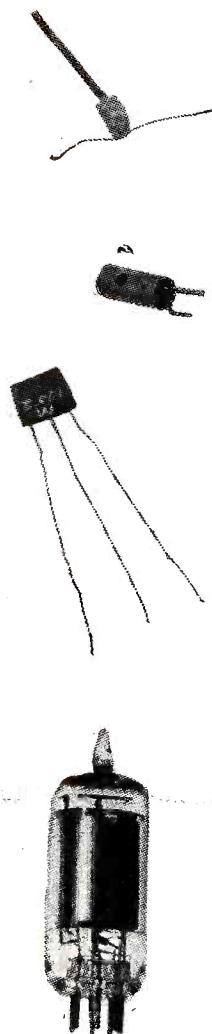
Type	Composition	Electrical Resis. Ohms/Cir. Mil Ft.	Coefficient of Linear Expansion 10 ⁻⁶
Inco Nickel Alloys			
Inconel	88 Ni, 12 Cr	590	11.5
"A" Nickel	99+ Ni	58	13.3
Alray Electrical Resistance Alloy			
Alray "A"	80 Ni, 20 Cr	650	17
Alray "C"	62 Ni, 15 Cr	675	17
Almet Stainless Steels			
Almet 300 Series	18-25 Cr, 8-20 Ni	600 to 425	8.0-9.6
Almet 400 Series	12-18% Cr	360	5.7-5.9

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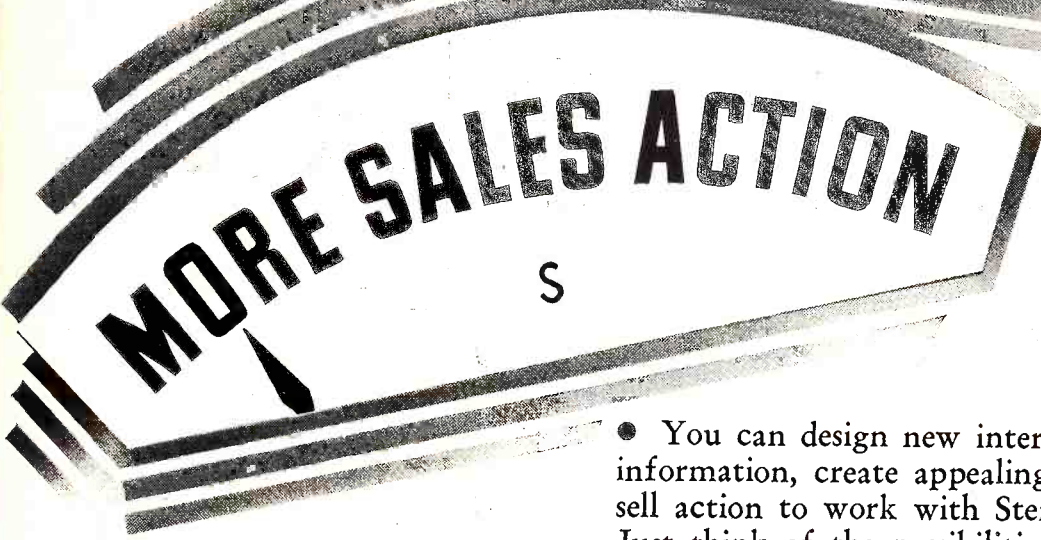
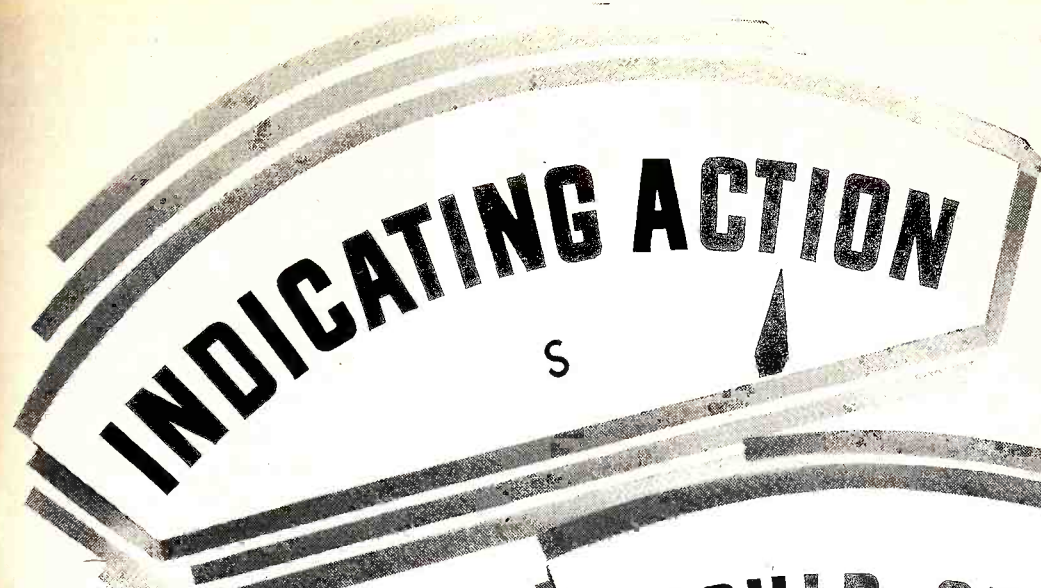


*Trade Mark of Alloy Metal Wire Co., Inc.

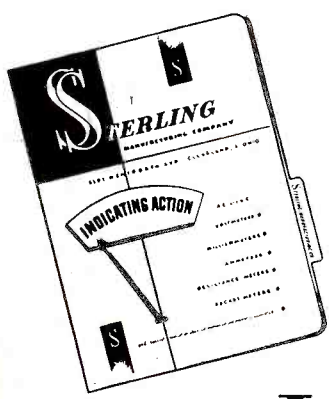
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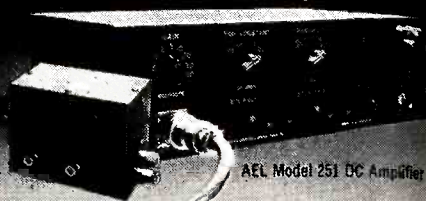
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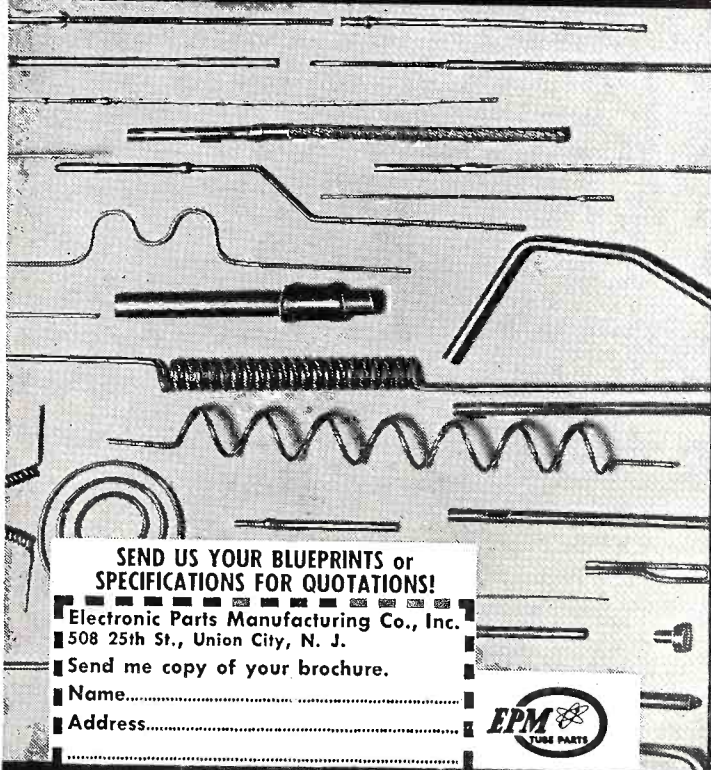
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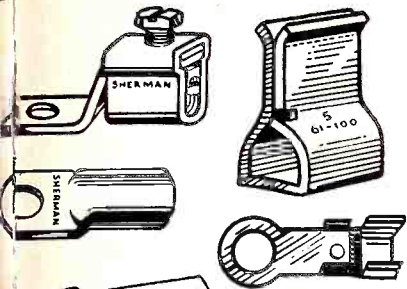
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But, there is very little cross-over in subscriber lists of the two publications — a matter of a few percentage points.

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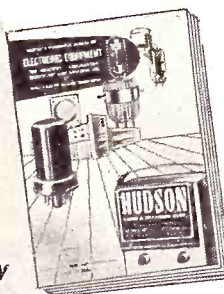
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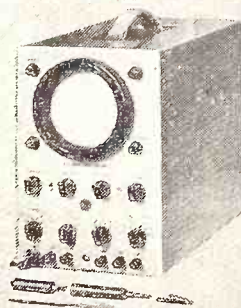


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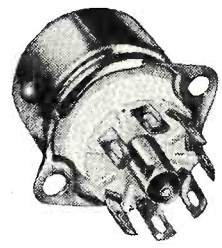
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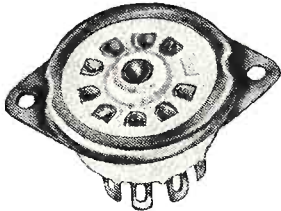
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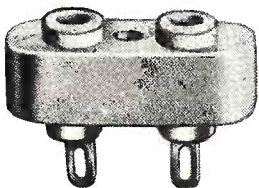
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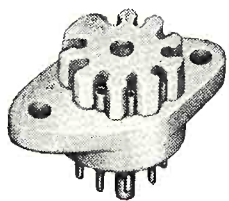
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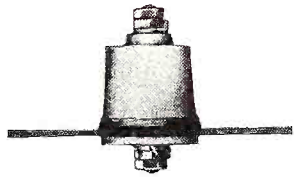
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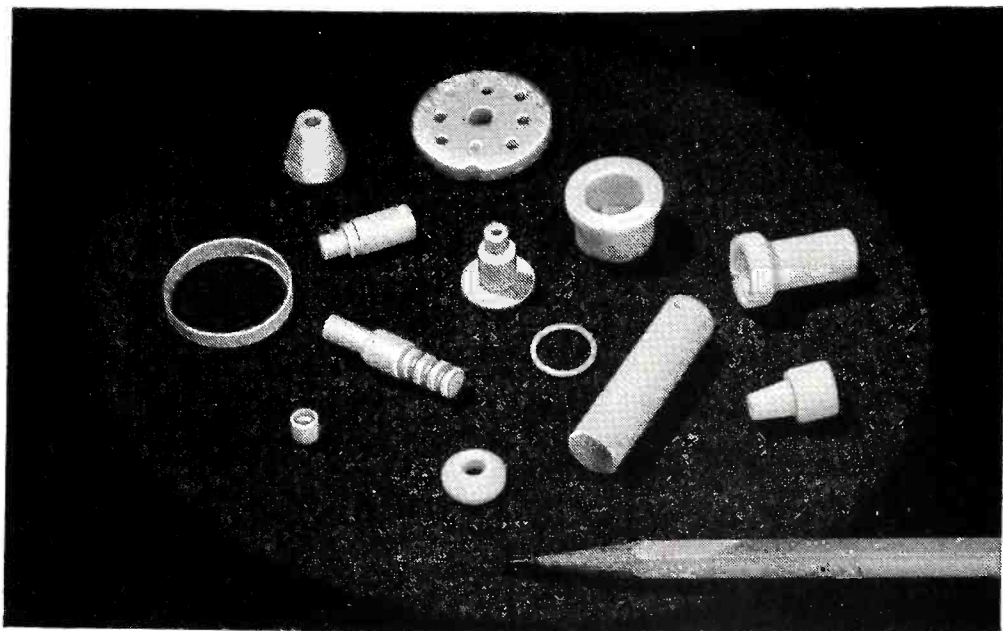
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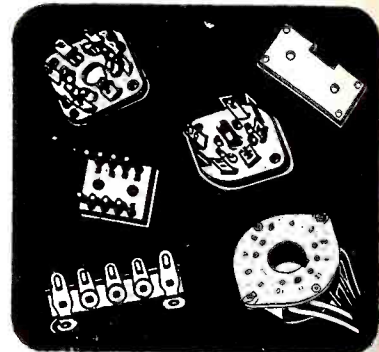
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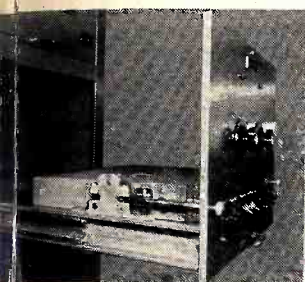
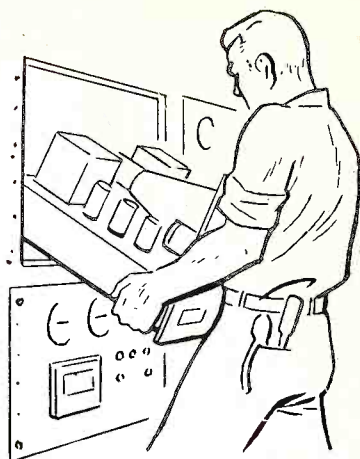
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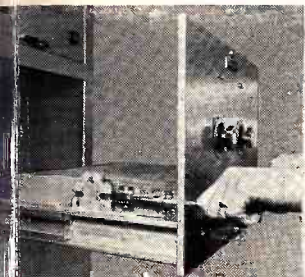
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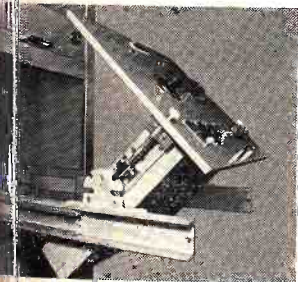
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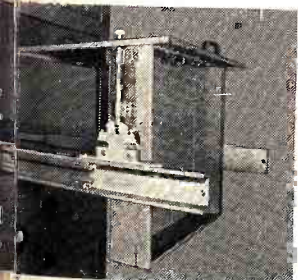
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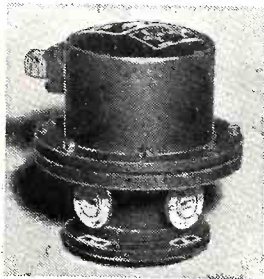
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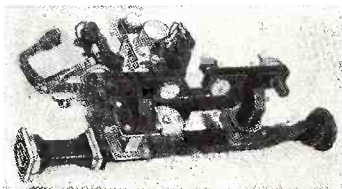


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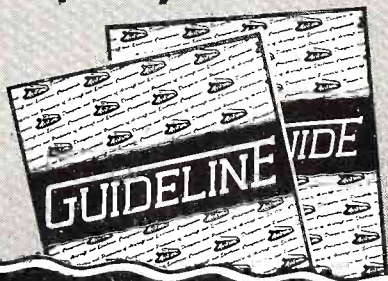
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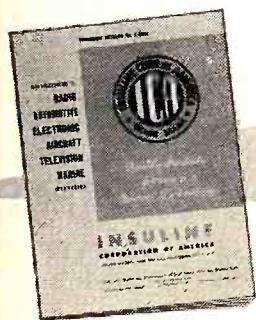
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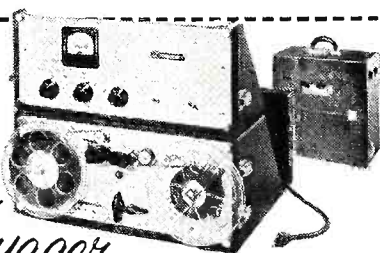
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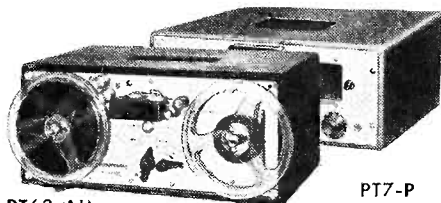
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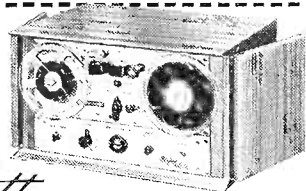
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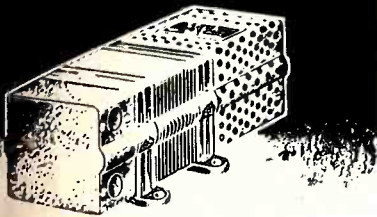


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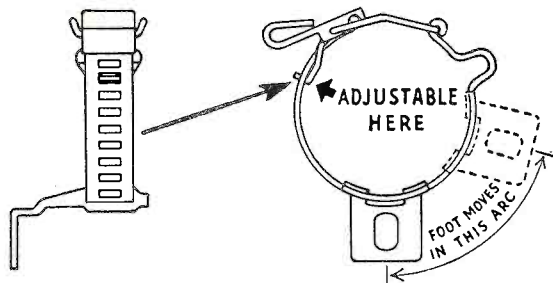
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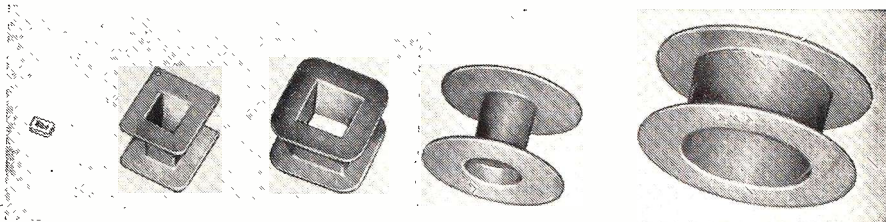
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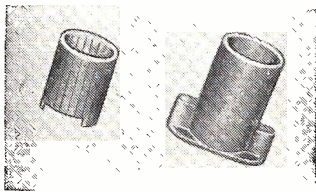
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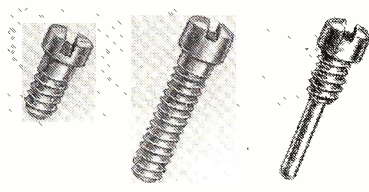
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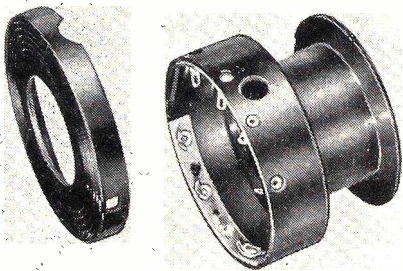
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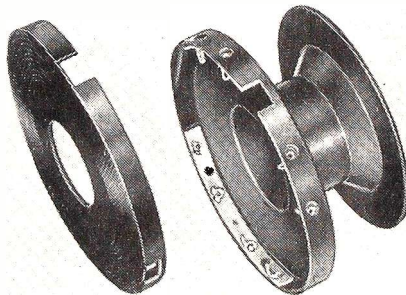
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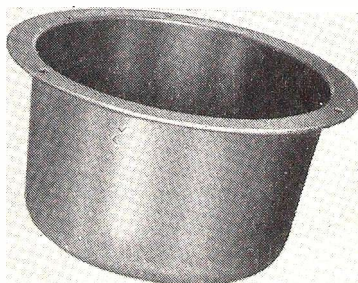


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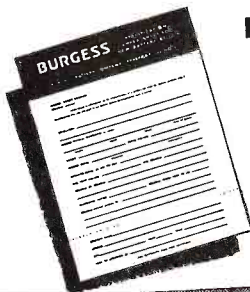
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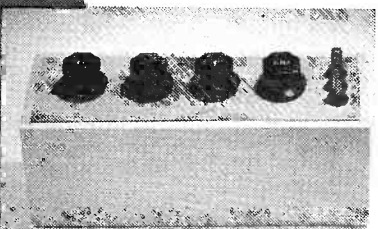
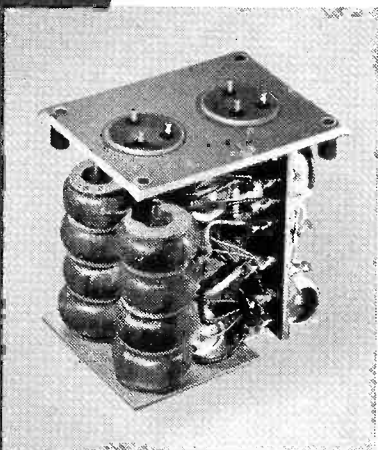
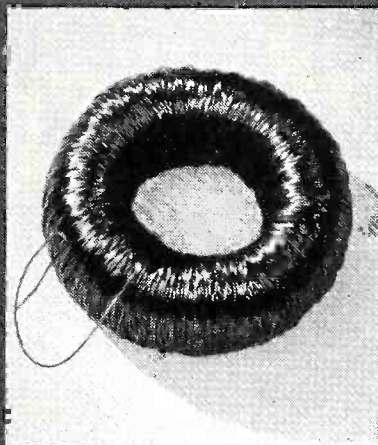
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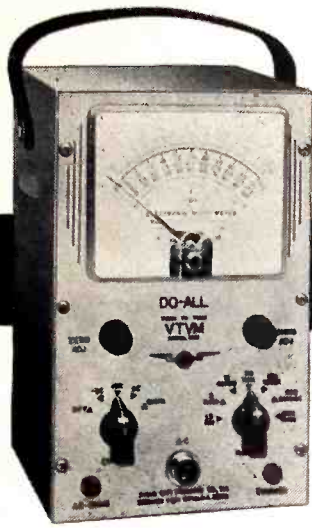


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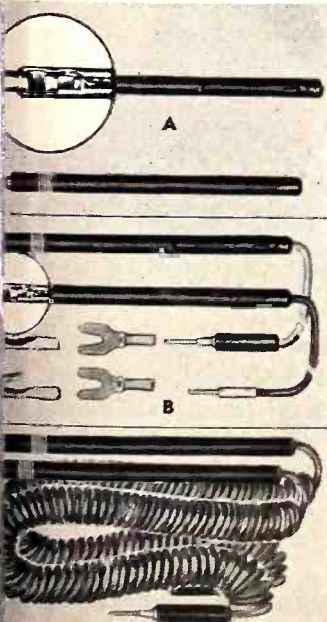


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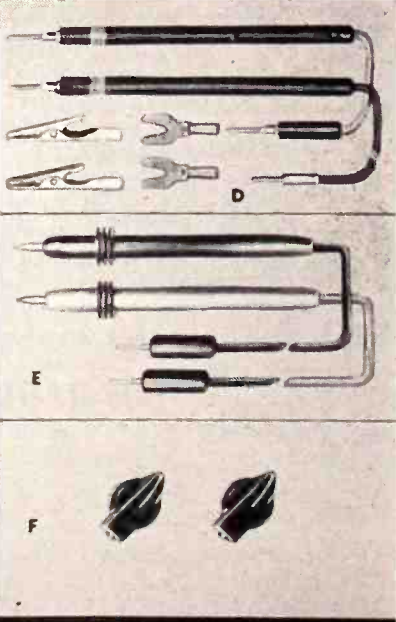
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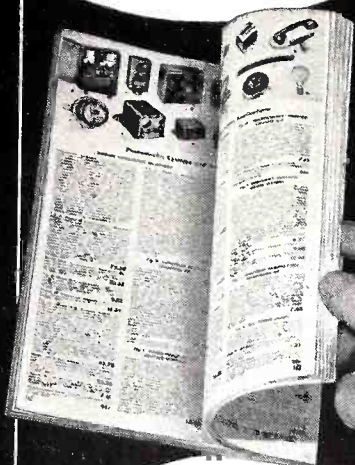
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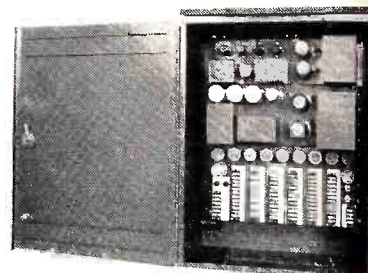
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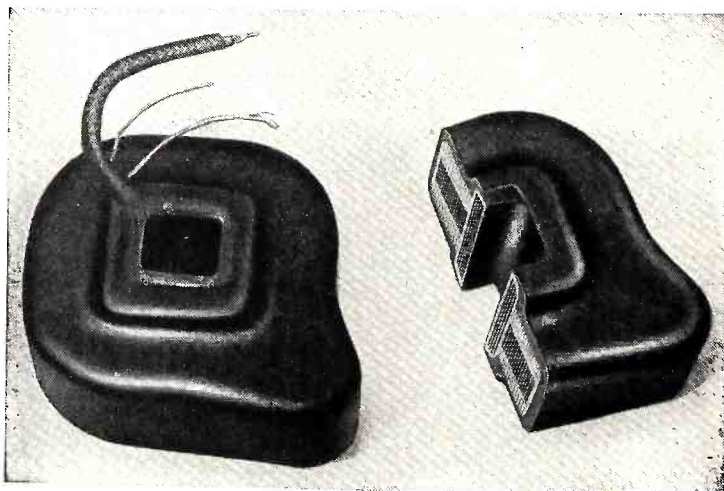


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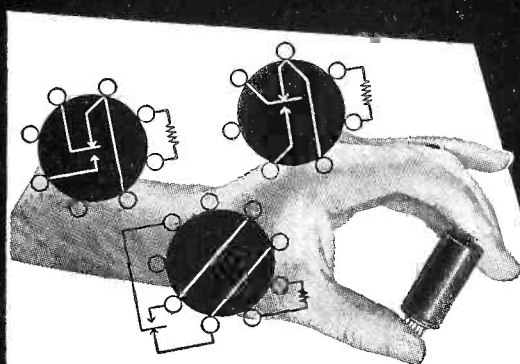
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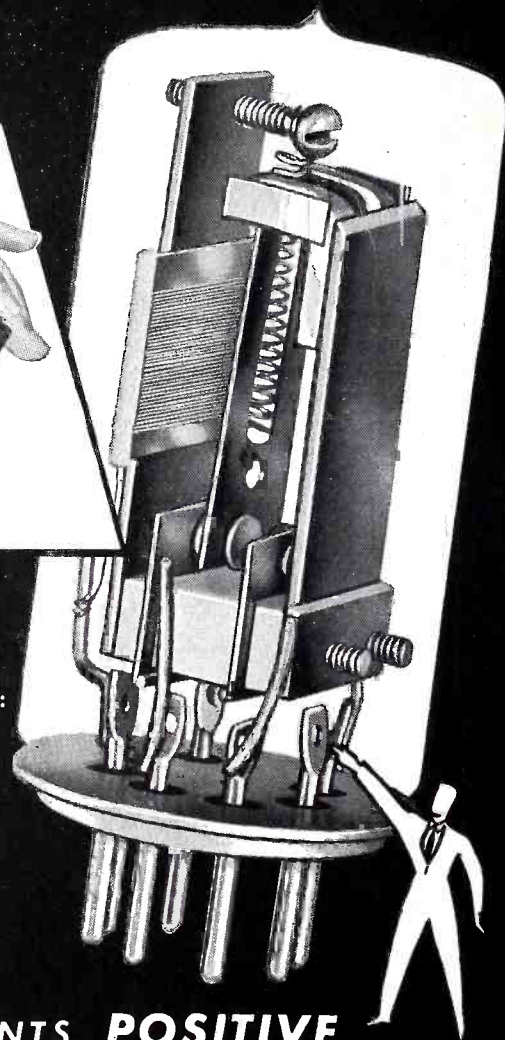
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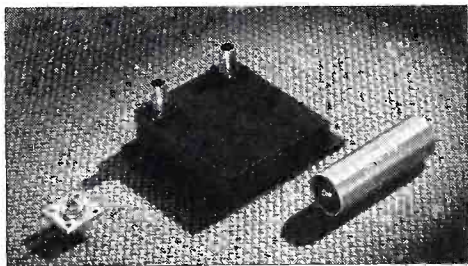
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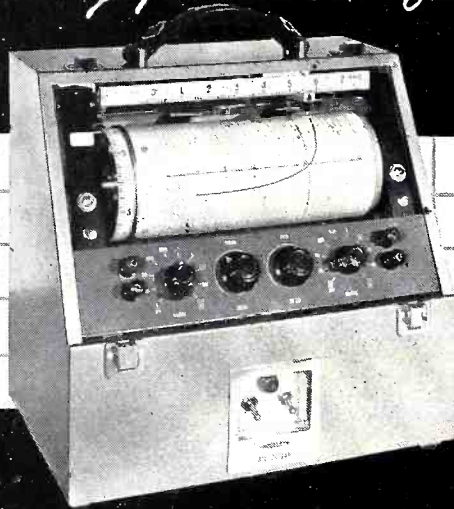
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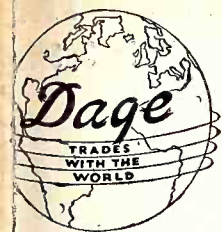
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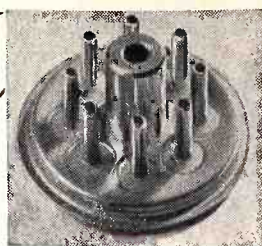
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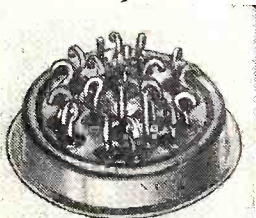
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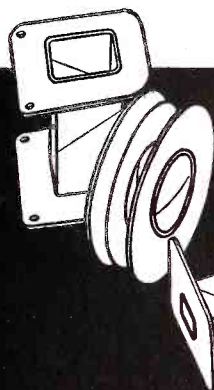
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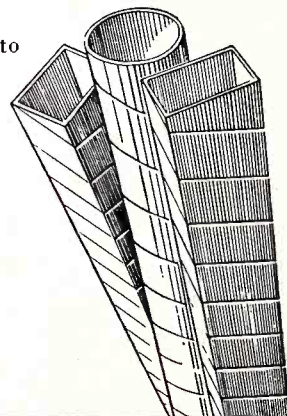
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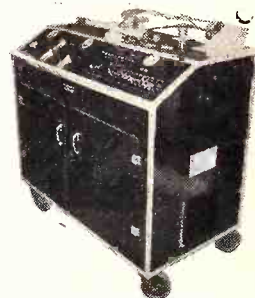
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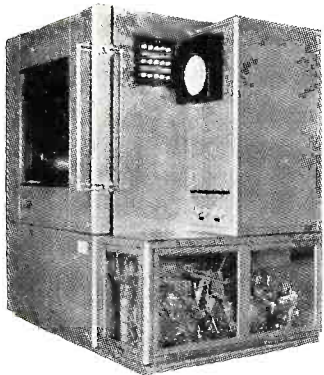
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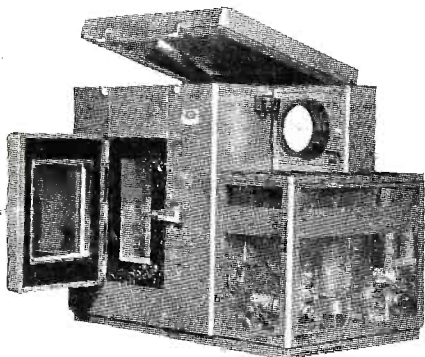
CONRAD *Experience*

IN INDUSTRIAL COOLERS...

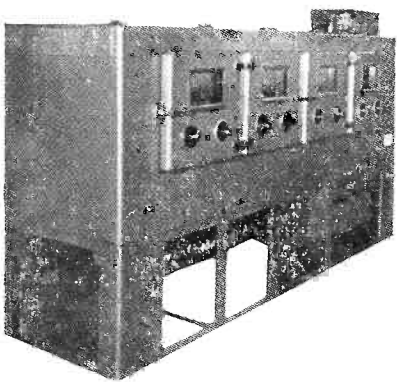
your Assurance of Reliability · Performance · Value



• 36 cu. ft. ALL-WEATHER TEST CHAMBER. +200 to -100F. 95% to 20% humidity control. Recording control of all conditions.



• Large CHEST TYPE CHILLING UNIT. Has front view and access door with Conrad counter-balanced full-opening top lid.

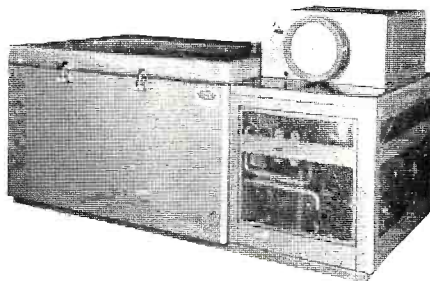


• PRODUCTION LINE test chamber for electronics equipment. Ports for hands. Forced-air circulation with temperature range between 200 and -100F.

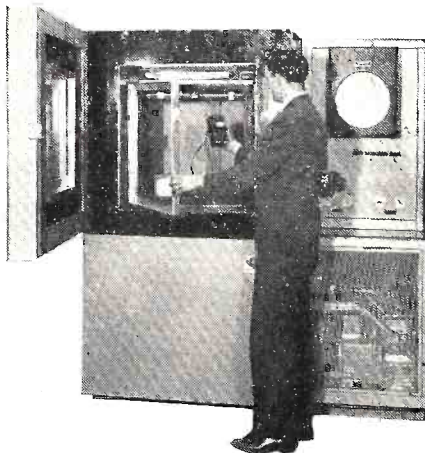
★ 16 years of continuous refrigeration experience. ★ Years of experimental engineering research and development on low temperature and controlled atmosphere chambers. ★ Experienced engineering staff to assure you of Industrial Coolers which fully meet your needs. ★ Devoted exclusively to the development and production of the most advanced type of Industrial Coolers.

★ It costs no more to get the most advanced features and systems—and that's what you get in Conrad Industrial Coolers. Here are just a few Conrad facts and "firsts"

★ First **COMMERCIALY-AVAILABLE** refrigeration equipment using Freon 13—Freon 22 Cascade system. ★ First new type Cascade system (patent applied for). ★ First using standard, accessible, sealed-motor compressor units. ★ First all-steel, die-formed and welded industrial refrigeration equipment eliminating wood frames.



• Controlled temperature TEST OR PROCESS CHAMBER (12' x 2' x 3') -100F or colder. Forced air circulation, multipane view window. Conduits and ports to order as needed.



• ALL WEATHER TEST CHAMBER 2' x 2' x 2' with full temperature, humidity and altitude controls and recorder.

Other models to customer's specifications

Conrad

INDUSTRIAL COOLERS

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THE **13** YEAR
of the **13**TH issue

of the

electronics BUYERS' GUIDE

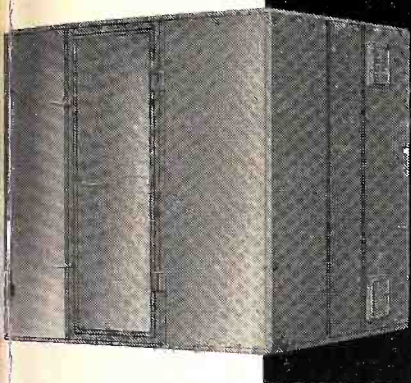
- For Product Information
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- For Distributor Listings

When buying or requesting product information be sure to mention...

electronics
BUYERS' GUIDE

SOLID

SHIELDED ENCLOSURES



for Suppressing R-F Interference

- PORTABLE
- WEATHER-PROOF
- AIR CONDITIONED

Here's the all-weather copper enclosure that surpasses all normal requirements for radio interference suppression. Based on Uniform Field tests of an independent laboratory, RFI Solid Shielded Enclosures are guaranteed to produce at least 100 db attenuation from 200 kc to 1000 mc. In actual use even greater attenuation may be expected.

These sturdy enclosures are fabricated from Lindsay Structure framing, widely known for its ease of assembly, disassembly, and durability. Solid copper panels rigidly bolted to copper-plated steel channels offer the highest strength-to-weight ratio of any commercial shielded enclosure made.

Standard RFI enclosures are available in many standard sizes to suit your requirements. Various services such as power, water, gas, and transmission lines may be brought into the room. For complete details, including performance graphs, applications, and sizes available, write for Bulletin No. 1.

RFI Shielded Enclosures, Corp.

3634 N. Lawrence St., Philadelphia 40, Pa.

Telephone REgent 9-2537

DC-AC CHOPPERS

New 1953 Models for Military Use — 0-500 CPS



Tops in Performance — Tops in Dependability

Stevens-Arnold choppers are electro-mechanical precision vibrators that are used as modulators or demodulators. Designed specifically for airborne applications, and 1000 hours operation.

- Gold contacts used exclusively. Gold is the only material that assures superior chopper-performance in the critical 0-1½ volt DC range.
- Multiple testing guarantees uniformity. Before shipment, each unit must pass *two* complete operating tests at 3 different temperatures — -55°C., +25°C. and +85°C.
- Not only are all military specifications met, but liberal safety factors have been provided to meet emergency conditions of voltage and frequency. Example: — frequency tolerance 0-500 cps, coil voltage tolerance +30% -20%.



Also Available 60-CYCLE TYPES

A complete line of single and double-pole types.



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- Catalog 208 B — (0-500 cps)
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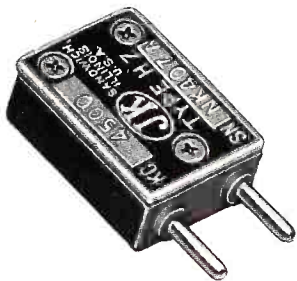
For further information

Write the **JAMES KNIGHTS
COMPANY, Sandwich, Ill.**

Crystals



*for the
critical*



JK STABILIZED H-7

Frequency Range 3 to 16 mc
Holder material black phenolic
Pressure mounting, stainless steel electrodes
Water and Dust Proof
Military type FT243 holder,
CAATC No. 3R1-1

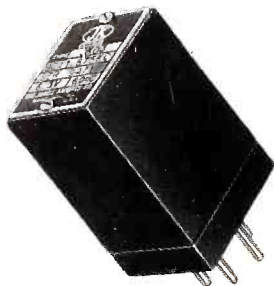


JK STABILIZED G-9, G-9J

Frequency range 1.20 KC to 300 KC
Hermetically sealed glass holder
Wire mounted, gold or silver plate crystals
6V6GT envelope, octal base
MIL HC-15/U

JK STABILIZED HEAT JKO-3

Holds one type H-17 unit (Military HC6/U)
Temperature adjustable 50 to 70°C
Ambient range depends on operating temperature desired
Heater 6.3 volts at 1½ amp.
Standard 5 pin base

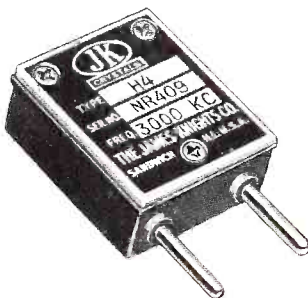


JK STABILIZED H-18

Frequency range 80 kc to 2 mc
Hermetically sealed metal holder
Wire mounted, plated crystals
H18 has octal base, H18-L has 2 pins 1/8" dia. on 3/4" centers, H18-5 has standard 5 pin tube base.



H-18



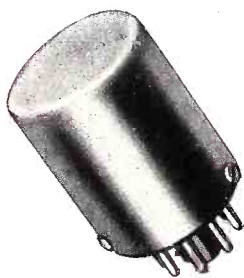
JK STABILIZED H-4

Frequency Range 1800 kc to 16 mc
Holder Material Black Phenolic
Pressure Mounting, Stainless Steel Electrodes
Water and Dust Proof
Military Type HC1/U Holder



JK STABILIZED H-9

Frequency Range 85 to 300 kc
Holder base Black Phenolic
Holder can Anodized aluminum
Wire mounted silver plated crystal
Water and Dust proof
Especially light and compact.



JK STABILIZED HEAT JKO-2

Holds two type H17 units (Military HC6/U)
Normal temperature 75° ± 5°C.
Ambient range — 55 to 70°C.
Heater 6.3 volts, under 1 amp.
Standard octal base



H-17

JK STABILIZED H-17

Frequency Range 200 to 500 kc and 1 to 75 MC
Hermetically sealed metal holders
Wire mounted, plated crystals
Two type H-17 holders fit loctal socket
H-17 is military type HC6/U, CAATC No. 3R1-3



**JK STABILIZED BROADCAST UNIT
JK57M & JK87M**

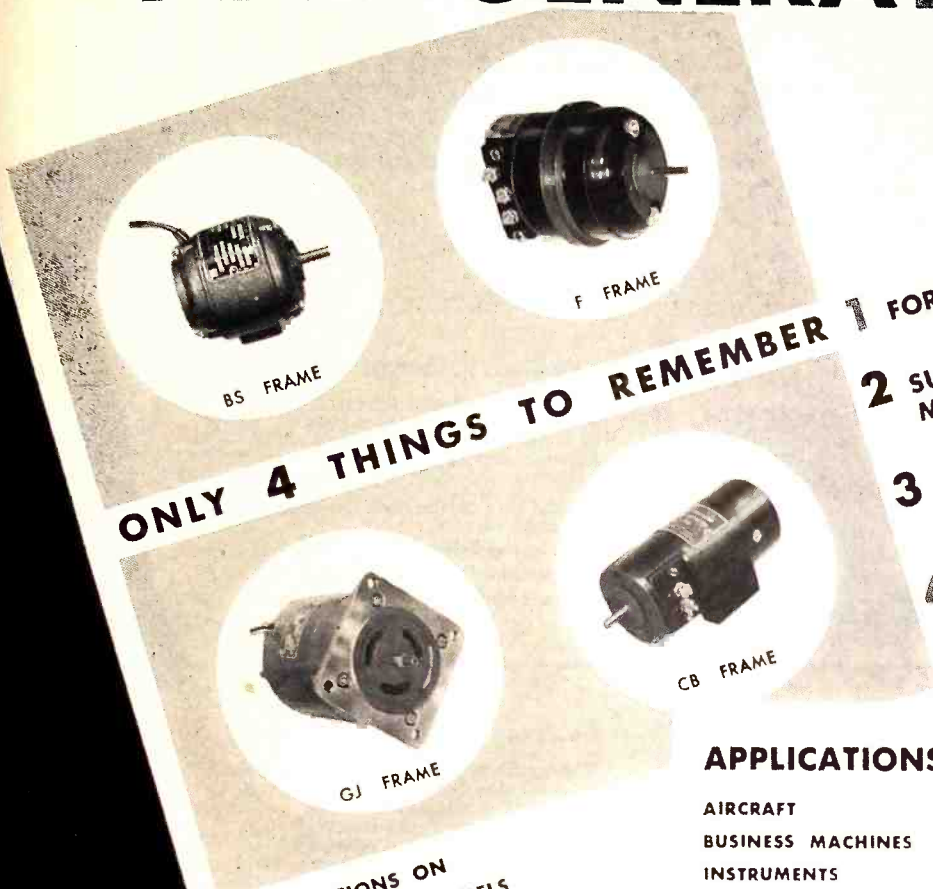
Frequency range 400 kc to 1750 kc adjustable ± .01%
Normal temperature 60°C ± 2°C (adjustable ± 10°C)
Ambient range for 60°C operation, — 20 to + 58°C
Heater 6.3 volts at 1½ amp.
JK57M has standard 5 pin base, JK87M has octal base
Low temperature coefficient plate will stay within FCC tolerance during warmup from normal room temperature
F.C.C. approved for broadcast use.
JK57MT & JK87MT have thermometer



**JK STABILIZED HEAT
JK07, JK07E**

Will hold any JK type crystal except H-6, H-18T and H-19
Normal operating temperature 50°C ± 2°C
Will hold temperature as much as 75°C above the ambient.
Supplied complete with Johnson No. 237 socket.
JKO-7E has sealed-in-glass thermostat for greater precision and longer life.
Available as JK07 or JK07E with 6.3 volt 10 watt heater or 115 volt 12 watt heater on either model
Ideal for frequency standards and broadcast (FM & TV) FCC approved.

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INDUCTION • DRAG CUP

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AC DYNAMICALLY BRAKED
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INSTRUMENT-TYPE PRECISION BALL BEARINGS
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INDIVIDUALLY TESTED UNDER SPECIFIC LOAD CONDITIONS
ANY MECHANICAL OR ELECTRICAL VARIATION TO MEET ANY SPECIAL CONDITIONS

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Please outline your problem in full detail when requesting quotations or literature. Every unit is specially designed and engineered to your exact requirements. Every unit is a precision instrument, manufactured to meet your highest performance standards. We have NO STOCK UNITS, no "mass-produced" units available. If you need a manufacturer of proven ability, with a long-established reputation for designing and producing to the most exacting standards, Elinco can serve you.

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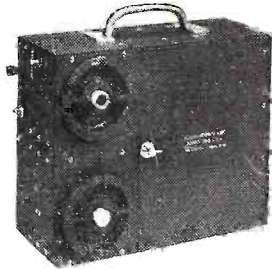
dependable instruments

- Recording oscillographs
- galvanometers
- bridge balances
- amplifier systems
- associate equipment

700B Multi-Channel Recording Oscillograph

The only oscillograph using up to 12" recording media that can be conveniently mounted in a standard 19" relay rack.

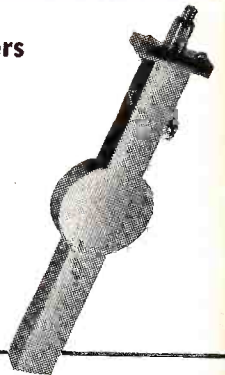
- Operation, control and loading from one surface.
- Designed for rack or table mounting.
- Direct monitoring of galvanometer light spots while recording.
- Up to 36 channels.



Sensitive . . . Rugged Galvanometers

Outstanding features are high sensitivities and ruggedness of construction. Simple and rapid adjustment in vertical and horizontal planes.

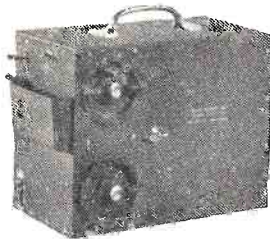
- Solid case construction . . . completely dustproof.
- New, convenient connector terminals.
- Rotational limit stop.
- Low zero drift.



500B Portable Recording Oscillograph

Compact and lightweight providing maximum portability and versatility where it is desired to record up to 12 phenomena.

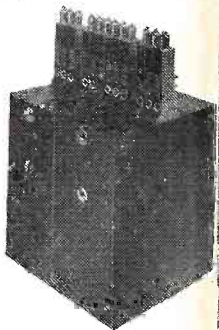
- Direct monitoring while recording.
- Right angle monitoring hood.
- Automatic aperture adjustment.



Galvanometer Assembly

The arrangement of galvanometers side by side in a common magnetic field makes possible the use of a maximum number of channels in an oscillograph of minimum dimensions. Permanent magnet assemblies are available for mounting two or six Heiland Galvanometers or multiples of six.

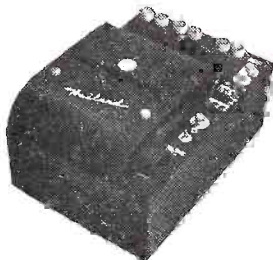
- Overall dimensions of six trace bank with galvanometers:
5 7/8" (H) x 3" (D) x 1 7/8" (W)



A-401 Portable Recording Oscillograph

Optional 8 volt battery pack provides self contained power source affording complete portability and flexibility of application.

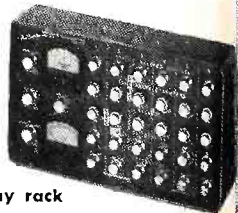
- Completely portable . . . optional 8 volt battery supply.
- Direct monitoring while recording.
- Compact: 7" x 12 1/4" x 9"
Lightweight: 39 lbs.



"82-6" Bridge Balance and Strain Indicator

The "82-6" provides a simple, accurate means of calibrating static and dynamic output from resistive type transducers, or strain gages, before feeding these phenomena into a recording oscillograph. Static and slowly changing phenomena may be read directly on the sensitive output meter.

- One panel operation permits standard relay rack mounting or two-position table mounting.
- Individual channel control for coarse and fine voltage, balance, calibration and attenuation.



New, Miniature 35mm Recording Oscillograph

Designed and developed to meet an increasing demand for a small, lightweight oscillograph with accuracy of amplitudes and timing, uses 35 or 50mm paper of film.

- All operating controls on one surface.
- Compact: 10 1/8" x 6" x 4 1/4"
Weight: 15 lbs.
- Remote speed control . . . 8 recording speeds.
- Up to 12 galvanometers.



(For Delivery February, 1954)

Amplifier System

Carrier linear/integrating amplifier system. Flat response 1,000 cycle with carrier amplifier. Flat response beyond 2,000 cycles with linear/integrating amplifier. High output power. Small . . . compact . . . designed for rack or table mounting.

(For delivery October 1st)

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R.F. CONNECTORS



Remember, Waltham manufactures the complete connector, including all component parts, in a new, modern factory where "quality control" results in products of the highest engineering calibre.

— All connectors manufactured to J. A. N. Specifications.

DESCRIPTION	TYPE	ITEM NO.	DESCRIPTION	TYPE	ITEM NO.	DESCRIPTION	TYPE	ITEM NO.	DESCRIPTION	TYPE
UG 9/U PLUG	(N)	35	UG 59A/U PLUG	(HN)	68	UG 160A/U JACK BULKHEAD	(N)	103	UG 309/U ADAPTER	(BNC to HN)
UG 10/U PANEL JACK	(N)	36	UG 59B/U PLUG	(HN)	69	UG 160B/U JACK BULKHEAD	(N)	104	UG 342/U PLUG RT ANGLE	(BN)
UG 11/U JACK	(N)	37	UG 59C/U PLUG	(HN)	70	UG 167A/U PLUG	(N)	105	UG 347/U RECEPTACLE	
UG 12/U PLUG	(N)	38	UG 60A/U JACK	(HN)	71	UG 167B/U PLUG	(N)	106	UG 348/U RECEPTACLE	
UG 13/U PANEL JACK	(N)	39	UG 60B/U JACK	(HN)	72	UG 167C/U PLUG	(N)	107	UG 414/U ADAPTER STRAIGHT	(BNC)
UG 14/U JACK	(N)	40	UG 60C/U JACK	(HN)	73	UG 173/U ADAPTER REDUCING	(UHF)	108	UG 421/U PLUG	(UHF)
UG 15/U PLUG	(N)	41	UG 61A/U PANEL JACK	(HN)	74	UG 175/U ADAPTER REDUCING	(UHF)	109	UG 422/U RECEPTACLE	(UHF)
UG 16/U PANEL JACK	(N)	42	UG 61B/U PANEL JACK	(HN)	75	UG 176/U ADAPTER REDUCING	(UHF)	110	UG 496/U	
UG 18B/U PLUG	(N)	43	UG 61C/U PANEL JACK	(HN)	76	UG 180A/U PLUG	(PULSE)	111	UG 516/U ADAPTER	(LN to N)
UG 19B/U PANEL JACK	(N)	44	UG 83/U ADAPTER	(N to UHF)	77	UG 181A/U JACK BULKHEAD	(PULSE)	112	UG 535/U RECEPTACLE RT.	
UG 20B/U JACK	(N)	45	UG 85/U PLUG	(BN)	78	UG 182A/U JACK	(PULSE)		ANGLE	(BNC)
UG 21/U PLUG	(N)	46	UG 87/U RECEPTACLE	(BN)	79	UG 185/U RECEPTACLE	(BNC)	113	UG 536/U PLUG	(N)
UG 21B/U PLUG	(N)	47	UG 88/U PLUG	(BNC)	80	UG 188/U PLUG	(N)	114	UG 564/U ADAPTER	(C to N)
UG 21C/U PLUG	(N)	48	UG 88B/U PLUG	(BNC)	81	UG 201/U ADAPTER	(BNC to N)	115	UG 565/U ADAPTER	(C to N)
UG 21D/U PLUG	(N)	49	UG 89/U JACK	(BNC)	82	UG 206/U RECEPTACLE	(BN)	116	UG 566/U ADAPTER	(C)
UG 22B/U PANEL JACK	(N)	50	UG 89/U JACK	(BNC)	83	UG 212A/U ADAPTER RT. ANGLE	(HN)	117	UG 567/U ADAPTER	(C)
UG 22C/U PANEL JACK	(N)	51	UG 91A/U PLUG	(N)	84	UG 213/U ADAPTER	(N to LN)	118	UG 568/U RECEPTACLE	(C)
UG 22D/U PANEL JACK	(N)	52	UG 92A/U JACK	(N)	85	UG 213A/U ADAPTER	(N to LN)	119	UG 569/U RECEPTACLE	(C)
UG 23B/U JACK	(N)	53	UG 93A/U PANEL JACK	(N)	86	UG 224/U ADAPTER BULKHEAD	(UHF)	120	UG 570/U JACK	(C)
UG 23C/U JACK	(N)	54	UG 94A/U PLUG	(N)	87	UG 241/U ADAPTER	(BN to UHF)	121	UG 571/U PANEL JACK	(C)
UG 27A/U RT. ANGLE ADAPTER	(N)	55	UG 95A/U JACK	(N)	88	UG 242/U ADAPTER TEE	(BN)	122	UG 572/U JACK	(C)
UG 27B/U RT. ANGLE ADAPTER	(N)	56	UG 96A/U PANEL JACK	(N)	89	UG 254A/U RECEPTACLE PRESS	(BNC)	123	UG 573/U PLUG	(C)
UG 28A/U ADAPTER TEE	(N)	57	UG 97A/U ADAPTER RT. ANGLE	(LN)	90	UG 255/U ADAPTER	(BNC to UHF)	124	UG 589/U PLUG	(BNC)
UG 29B/U ADAPTER STRAIGHT	(N)	58	UG 98A/U RECEPTACLE	(LN)	91	UG 260/U PLUG	(BNC)	125	UG 625/U RECEPTACLE	(BNC)
UG 30/U ADAPTER BULKHEAD		59	UG 100A/U PLUG	(LN)	92	UG 260A/U PLUG	(BNC)	126	MX 913/U CAP & CHAIN	(C)
PRESS	(N)	60	UG 101A/U PANEL JACK	(LN)	93	UG 261/U JACK	(BNC)	127	CW 123/U CAP & CHAIN	(C)
UG 30B/U ADAPTER BULKHEAD		61	UG 102A/U PLUG	(UHF)	94	UG 261A/U JACK	(BNC)	128	CW 123A/U CAP & CHAIN	
PRESS	(N)	62	UG 103A/U RECEPTACLE	(UHF)	95	UG 262/U PANEL JACK	(BNC)	129	CW 155/U CAP	(BNC)
UG 35/U RECEPTACLE PULSE		63	UG 104A/U ADAPTER RT.		96	UG 262A/U PANEL JACK	(BNC)	130	CW 155A/U CAP	(BNC)
UG 39/U COVER FLANGE			ANGLE	(UHF)	97	UG 273/U ADAPTER	(BNC to UHF)	131	SO 239 RECEPTACLE	(UHF)
UG 40/U CHOKE FLANGE		64	UG 105A/U ADAPTER		98	UG 274/U ADAPTER TEE	(BNC)	132	PL 258 ADAPTER STRAIGHT	(UHF)
UG 53/U COVER FLANGE			STRAIGHT	(UHF)	99	UG 290/U RECEPTACLE	(BNC)	133	PL 259 PLUG	(UHF)
UG 54/U CHOKE FLANGE		65	UG 107B/U ADAPTER TEE	(N)	100	UG 291/U PANEL JACK	(BNC)	134	PL 259A PLUG	(UHF)
UG 57B/U ADAPTER, STRAIGHT	(N)	66	UG 146/U ADAPTER	(N to UHF)	101	UG 291A/U PANEL JACK	(BNC)	135	PL 274 PLUG	(UHF)
UG 58/U RECEPTACLE	(N)	67	UG 159A/U JACK BULKHEAD	(N)	102	UG 306/U ADAPTER RT. ANGLE	(BNC)	136	UG 920/U ADAPTER RT. ANGLE	(HN)

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Waltham Telephone Plugs and Jacks are nationally recognized as the "Standard of Quality" — they are manufactured from the finest materials by skilled craftsmen using the newest, most modern equipment. Our engineering staff is available for consultation without obligation on any plug or connector problem.

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PJ-055B	PJ-540B	JJ-026	JJ-055

All plugs can be supplied with red shells — specify when ordering.

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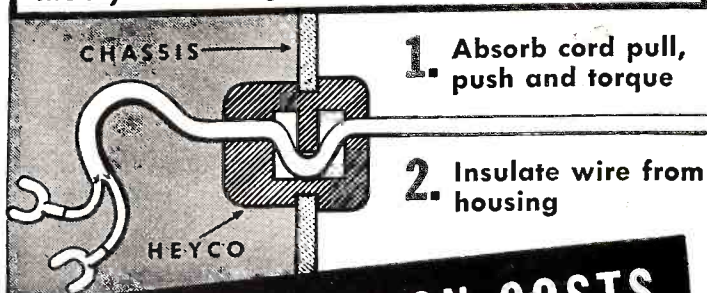
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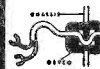


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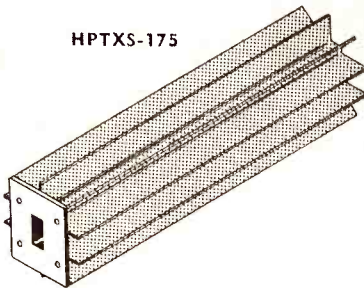
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HIGH POWER Waveguide TERMINATIONS



plex', a new ceramic lossy material, is now available in waveguide, high power terminations and attenuators from Electro Impulse Laboratory.

This new material is extremely durable, provides a strong adhesive bond to waveguide walls, withstands temperatures up to 2000° F, and handles the thermal shock efficiently.

It withstands up to 2000° F (does not emit steam or water, characteristic of dummy loads using a Portland cement and graphite mixture for the lossy material.)

The waveguide loads use walls that are poor conductors, which means a more efficient removal of the heat generated in the load, and less tendency toward pulsepower breakdown (arcing) as may occur in designs which use filling material in the waveguide.

HTS-1500 is an S Band, waveguide termination capable of 1500 watts dissipation in still air. It has a V.S.W.R. of less than 1.1 over the range of 2700 to 3400 mc. **Price \$185.00**

HPTXS-175 is an X Band, waveguide termination, capable of 200 watts dissipation in still air. It has a V.S.W.R. will not exceed 1.1 over the range of 8500 to 10,000 mc. **Price \$55.00.**

Many other standard terminations and attenuators available, non standard terminations made to specifications.

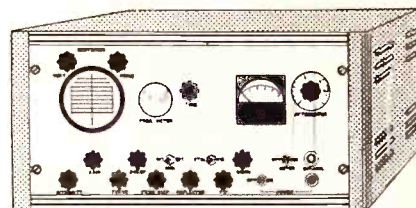


X BAND FREQUENCY POWER METER FPM-3

The Electro Impulse Laboratory Frequency Power Meter FPM-3 is a portable, completely self-contained instrument capable of frequency and power measurements over the range of 8500 to 9600 megacycles. It employs a direct reading type of frequency meter with an absolute accuracy of ± 4 mc and a relative accuracy of ± 1 mc on frequency differences of up to 60 mc.

Power measurements are accurate to $\pm .1$ db on power levels of 0-1 milliwatt and ± 1 db on power levels of 1-1000 milliwatts. A crystal detector circuit is also incorporated to allow the wave shape of the signal to be observed on an external scope.

Provisions for coupling to RG 51/U or RG 52/U waveguide or to coaxial source are provided. **Price \$275.00**

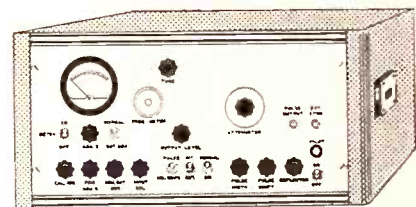


X BAND SPECTRUM ANALYZER

The model 6X Spectrum Analyzer uses a sensitive superhetrodyne receiver circuit, electronically regulated power supply and a cathod ray tube for visual presentation of information.

Its frequency meter circuit is of the direct reading type with an absolute accuracy of ± 4 mc over the range of 8500 to 9600 mc. It employs a directly calibrated attenuator capable of 0-30 db attenuation. Either coaxial or waveguide input may be used.

This instrument may also be used as a signal generator, and has provisions for external modulation of the R.F. oscillator for this service. **Price \$950.00**



X BAND TEST SET MODEL X-12

The Model X-12 Test Set is a portable X Band Signal Generator, with a self-contained wavemeter and power monitor. It will generate either pulsed or CW, RF power. Basically the unit consists of a 2K25 Klystron oscillator and associated "plumbing" a pulser for the oscillator which permits triggered or self-synchronous operation, a direct reading Thermistor bridge for power measurements, a metalized glass, RF attenuator calibrated in decibels below 1 milliwatt, a direct reading, reaction type wavemeter, and a regulated power supply.

The Thermistor and wavemeter are so designed that they may be used to measure the frequency and power of R.F. signals from an external source. On such measurements the attenuator is calibrated in db above 1 milliwatt, giving a power range of .1 to 1000 milliwatts, in the frequency band of 8500 to 9700 mc. V.S.W.R. will not exceed 1.35 at any attenuator setting within the frequency range. **Price \$700.00**

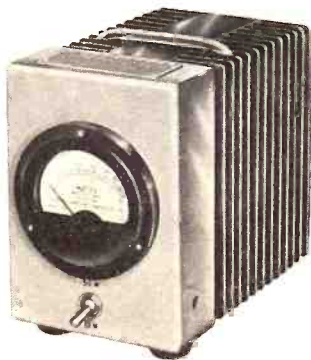
UHF POWER METER

The UHF power meter model PM-10 is a completely self-contained, cable-field or laboratory test instrument which consists of a line termination capable of 90 watts dissipation, and a power measuring unit which may be calibrated from 1 to 60 watts full scale.

This unit employs an oil filled, air cooled line termination which has a V.S.W.R. of less than 1.3 in the range of 0 to 1200 mc. V.S.W.R. in the power measuring range of 20 to 600 mc does not exceed 1.1. The power measuring circuit employs a resistive voltage divider, is free of spurious responses and has negligible error from response to frequencies over the range of 20 to 600 mc. The unit employs two scales, 0 to 15 and 0 to 60 watts, but may be calibrated for any full scale reading from 1 to 60 watts. R. F. connector is located at rear of instrument, facilitating direct connection to transmitter.

The power measuring circuit employs a standard silicon crystal, (type) which requires no special selection. The unit may be readily calibrated using accurately known 60 cps voltage when change of scale or special operating conditions require. The power meter is hermetically sealed, shock mounted, 200 microampere meter. Components are fully shielded from the effects of strong R. F. fields.

The meter housing is detachable from the main housing assembly, and is connected by a self storing 25 ft. cable, for use when it is desired to use the line termination at a remote location. **Price \$135.00.**



TUNED V.S.W.R. AMPLIFIER, MODEL A-12

The model A-12 Tuned V.S.W.R. Amplifier contains a sensitive, highly stable bridged amplifier of improved design, which may be tuned over the range from 500 to 10,000 cps, or used as a wide band amplifier. When used as a tuned amplifier for V.S.W.R. measurements, interference and random noise will not give false V.S.W.R. indications.

The scale is graduated to read V.S.W.R. from 1 to 4 on one range, and power standing wave ratio from 0 to 30 db, on three ranges. Input may be either from a bolometer or a crystal source, and output may be indicated on the self-contained meter, or on an external meter.

This instrument may also be used to measure R.F. attenuation in conjunction with a cable bolometer. **Price \$250.00.**



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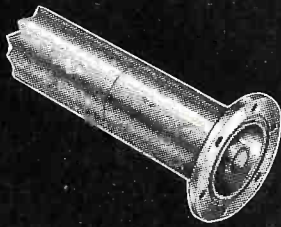
High gain omni-directional antennas, Type 3000 for 148-174 and Type 4000 for 450-470 MC.

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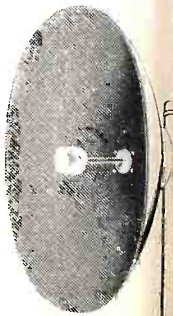
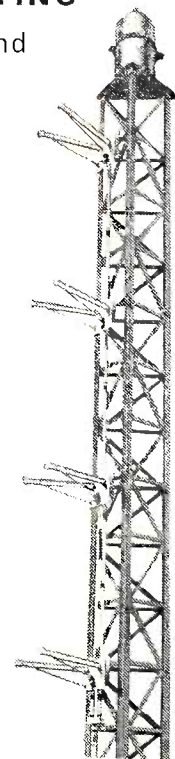
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Goat manufactures a line of tube shields for 7 & 9 Pin Tubes in the miniature field and split wraparound and seamless for various Loktal Tubes. For complete specifications write for our Catalog E52.

MINIATURE TUBE SHIELDS Series G1700

PLAIN

G1702 is a plain shield for a 7 pin miniature with .812 I.D. used with our G1710 and G1770 Base Clips.

G1705 is a plain shield for a 9 pin miniature with .850 I.D. and used with our G1780 Base Clip. (Above used with wafer type sockets.)

FLUTED

G1700 - The fluted tube is furnished for 7 pin only and is used where tight fit on the tube is necessary.

LANCED

G1702-2 is a lanced shield for 7 pin miniatures.

G1709 is a lanced shield for 9 pin miniatures.

These shields are used where tight fit on the tube is required and allows for expansion.

BEADED

Beaded shields for the 7 and 9 Pin Miniatures are used with Saddle Socket type only which includes our G1707 for 7 pin and G1706 for 9 pin and covers various lengths of tubes.

STANDARD TUBE SHIELDS G1332 Series

SEAMLESS

G1332 Series - seamless and fluted for GT/G, G and Loktal tubes in numerous variations. Complete specifications are listed in our E52 Catalog.

WRAPAROUND—LOKTAL

G1222 Series are wrap-around shields manufactured in four sizes to fit various tube types—Rings G691-1 and 2 are used on wraparound shield under high vibration conditions.

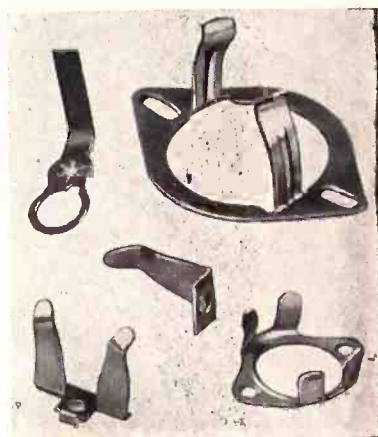
WRAP-AROUND— MINIATURE

G3560 is a wrap-around shield for effective shielding at low cost.



All GOAT miniature tube shields are produced from coated, cold-rolled steel stock. The particular finish—whether zinc, cadmium or electrolytic tin plate—varies, depending on availability of materials.

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GOAT base and ground clips are manufactured to exacting specifications to assure positive electrical grounding of the tube and tube shield. Like the tube shields, GOAT clips are classified for miniature and standard tube use. The miniature clips are of the prong base clip type, the spring steel prongs affording a firm grip on the shield yet permitting deliberate removal as often as necessary. The standard clips include this type as well as ordinary prong clips, tube ground clips and dual-purpose base ground clips.

GOAT

PRECISION METAL STAMPINGS

GOAT specialized equipment and mechanical facility in its use permits manufacture of highly accurate, precise and precise stampings from metal ranging from .005" to 1/8" thickness. We can draw to a depth of 1/2" or a blank diameter of approximately 9".

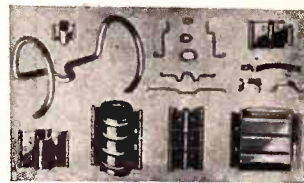
Besides stamping, drawing and blanking, the GOAT Company facilities include equipment for riveting, shearing, staking, spot welding, plating and assembling.



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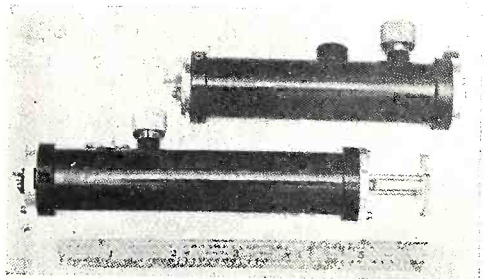
Our units feature small size, low driving power (generally milliwatts), fast response, high Q's, (typically from 30 to 150). Models are available for use up to 100 mc. They are light weight, rugged and shock resistant. Typical applications include high speed switching, FM, AFC and sweep oscillators, receiver front ends, all remote control problems, etc.

C. G. S. Laboratories, Inc., Systems Engineering Specialists have successfully used INCREDUCTOR techniques in modern commercial equipments and industrial electronic applications.

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Write for technical literature and prices.

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Typical Data: Length 4 1/2" Diameter 1" Weight 8 ounces.

Originated by C. G. S. Laboratories, Inc., our S-Band Cavities have been perfected in cooperation with Evans Signal Laboratory. They utilize the pencil tube series, and feature peak powers up to 1 kw on pulse, or average powers of at least 25 mw on CW. A single control provides up to 200 mc tuning range, or even more in some applications. End tuned and side tuned models are available. Upper frequency limit is 3400 mc on pulse types, 300 mc on CW models. Temperature drifts as low as ± 2 mc from -50 to $+70^\circ\text{C}$ are available. All applicable JAN specifications are met, including shock and vibration.



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- Fosterite
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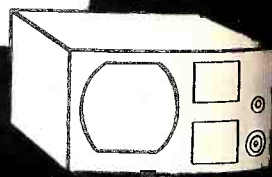
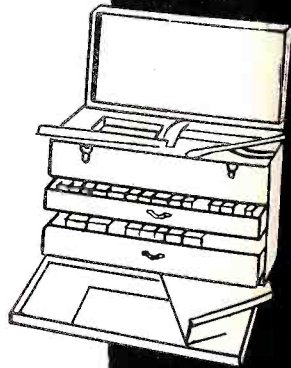
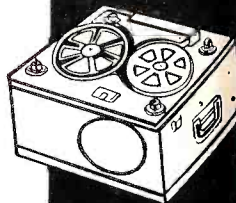


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MICROWAVE TEST EQUIPMENT

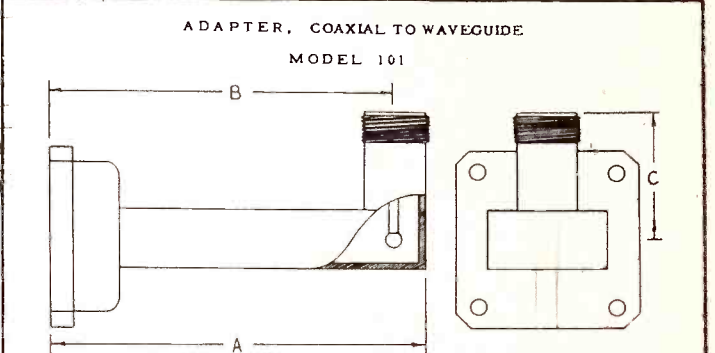
and Component Parts

design and production experience available for your special requirements, in waveguide or coaxial line, in frequency range 1000-40,000 mcs.

EQUIPMENT	L 1.44" x 3.41" 1.12-1.70 mc.	S 3" x 1 1/2" 2.6-3.95 mc.	C 2 1/2" x 1" 2.15-2.85 mc.	A 1 1/2" x 3/4" 1.85-2.30 mc.	B 1 1/2" x 3/4" 1.75-10 mc.	X 1" x 3/8" 8.2-12.4 mc.	G 3/4" x 3/8" 12.4-18 mc.	K 3/4" x 3/8" 18-25 mc.	T 3/4" x 3/8" 25-40 mc.
Coaxial to Waveguide	101L					101X		102K	102T
Waveguide-Choke to Choke		101S	101C	101A	101B	101X		102K	102T
Waveguide-Cover to Cover		102S	102C	102A	102B	102X		103G	103T
Waveguide-Cover to Waveguide		103S	103C	103A	103B	103X		103G	103T
Waveguide-Cover to Flange		110S			110B	110X		110G	
Waveguide-Flange		111S							
Waveguide-Cavity		120S	120C	120A	120B	120X		120G	120K
Waveguide-Flange		121S	121C	121A	121B	121X		121G	121K
Waveguide-Flange		122S	122C	122A	122B	122X		122G	122K
Waveguide-Flange		123S	123C	123A	123B	123X		123G	123K
Waveguide-Flange		124S				124X			
Waveguide-Flange		130L	130S	130C	130A	130B		130G	130K
Waveguide-Flange		131L	131S	131C	131A	131B		131G	131K
Waveguide-Flange		140L	140S	140C					
Waveguide-Flange		141L	141S						
Waveguide-Flange		142L	142S	142C					
Waveguide-Flange		150	(900-12,400 mcs.)						
Waveguide-Flange		151	(900-12,400 mcs.)						
Waveguide-Flange			160S	160C	160A				
Waveguide-Flange			161S						
Waveguide-Flange		170L							

EQUIPMENT	L 1.44" x 3.41" 1.12-1.70 mc.	S 3" x 1 1/2" 2.6-3.95 mc.	C 2 1/2" x 1" 2.15-2.85 mc.	A 1 1/2" x 3/4" 1.85-2.30 mc.	B 1 1/2" x 3/4" 1.75-10 mc.	X 1" x 3/8" 8.2-12.4 mc.	G 3/4" x 3/8" 12.4-18 mc.	K 3/4" x 3/8" 18-25 mc.	T 3/4" x 3/8" 25-40 mc.
Circular Guide Transition									
Crossbar Transition									
Shorts-Movable 1/2" line-Coaxial	280L	280S	280C	280A	280B	280X			
Shorts-Movable 1/4" line-Coaxial	281L	281S	281C						
Shorts-Movable 1/8" line-Coaxial	282L	282S							
Shorts-Movable 1/16" line-Coaxial	283L	283S	283C	283A	283B	283X			
Shorts-Movable-Mounted in line	290L	290S	290C	290A	290B	290X			
Shorts-Movable-Coaxial	291L	291S	291C						
Shorts-Movable-Coaxial	292L	292S							
Shorts-Movable-Coaxial	293L	293S	293C	293A	293B	293X			
Shorts-Movable-Coaxial	(14,000-10,000 mcs.)								

Illustrated are typical pages from our complete catalog—copies of which are available upon request.



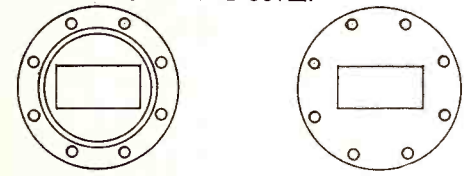
Model No.	Waveguide Type	Waveguide Size	Frequency kmc.	Max. vswr	Flange Type	Dimen.-Inches		
						A	B	C
101L	RG-69/U	6.66x3.41	1.12-1.70	1.50	UG-417	4.50	2	4.25
101S	RG-48/U	3 x 1.5	2.6-3.95	1.35	UG-53	3.50	2.62	3.25
101C	RG-49/U	2 x 1	3.95-5.85	1.35	UG-149	2.75	2	1.87
101A	RG-50/U	1.5x.75	5.85-8.2	1.50	UG-344	2.37	1.87	2
101B	RG-51/U	1.25x.62	7.05-10.0	1.35	UG-51	2	1.62	1.50
101X	RG-52/U	1 x .50	8.20-12.4	1.35	UG-39	2	1.62	1.75

APPLICATION: Couples waveguide and coaxial lines together.
 MATERIAL: Brass; beryllium copper and polystyrene.
 PLATING: Silver-.0002 to .0004 inches thick; rhodium flash.
 FINISH: External surfaces - gray enamel paint.

DOUGLAS MICROWAVE CO. Inc., 338 E. 95 St. New York 28, N.Y.

WAVEGUIDE FLANGES

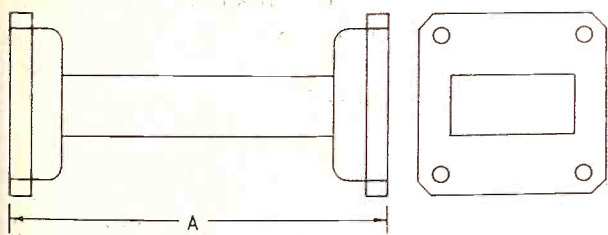
CHOKE AND COVER



UNIT type	UNIT brass	W.G. brass	W.G. size	UNIT alum.	W.G. alum.
Cover	UG-39/U	RG-52/U	1 x .500	UG-135/U	RG-67/U
Choke	UG-40/U	RG-52/U			
Choke	UG-40/U				

ADAPTER, WAVEGUIDE, COVER TO COVER

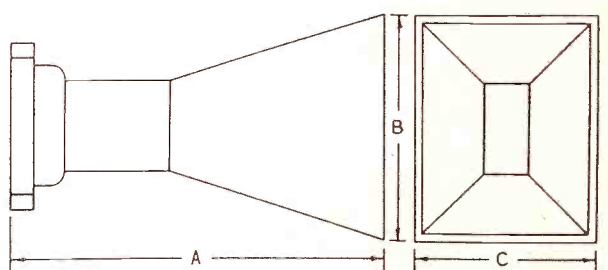
MODEL 103



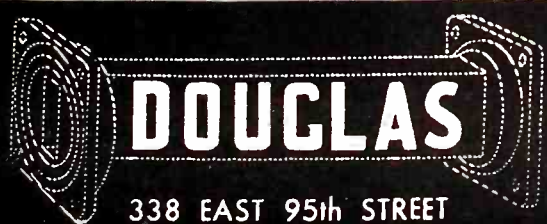
Model No.	Waveguide Type	Waveguide Size	Frequency kmc.	Cover Type	Length-in. A
103	RG-48/U	3 x 1.5	2.6-3.95	UG-53	6.3

ANTENNA, HORN

MODEL 1105



Model No.	Waveguide Type	Waveguide Size	Frequency kmc.	Max. vswr	Flange Type	Dimen.-Inches		
						A	B	C
1105	RG-48/U	3 x 1.5	2.6-3.95	1.25	UG-53	16	9.5	7



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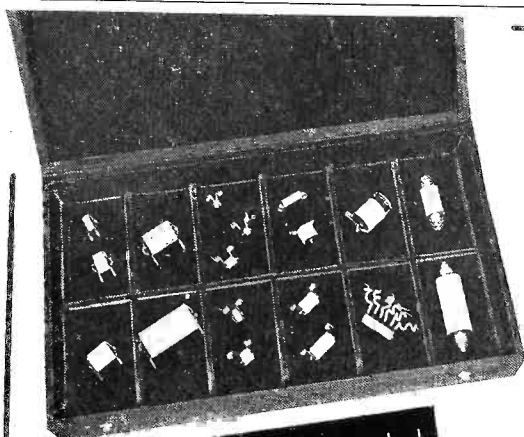
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Editor, *Electronics*; Vice Chairman, National Television System Committee

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TAPE WOUND CORES

High Permeability Magnetic Materials

MATERIALS: Normally stocked in thicknesses checked. Other materials and thicknesses available on special order.

Material Code	.001	.002	.003	.004	.006
Orthonol.	1A	2A	*	4A	*
Hy Mu 80.	1D	*	3D	*	6D
4-79 Permalloy.	1E	*	3E	*	6E
Armco 48.	*	*	3H	*	6H
AEM 4750.	*	*	3G	*	6G
Carpenter 49.	*	*	3B	*	6B
Armco Trancor TO.	1K	2K	3K	4K	*

* Normally not stocked in this gauge. Available on special order.

CASES: Cores are enclosed in fitted plastic boxes and filled with silicone grease to protect them from strains of winding, vibration and shock.

SIZES: Cores can be made to any size. More popular sizes are listed below.

Part No.	CORE SIZE			CASE SIZE		
	ID	OD	Height	ID	OD	Height
50000	.500	.750	.125	.440	.810	.195
50007	.625	1.000	.250	.575	1.070	.330
50002	.650	.900	.125	.590	.960	.195
50003	.750	.938	.250	.680	1.010	.330
50106	.750	1.125	.1875	.680	1.195	.260
50124	.750	1.250	1.000	.685	1.320	1.090
50011	1.000	1.250	.125	.930	1.320	.195
50004	1.000	1.250	.250	.930	1.320	.330
50029	1.000	1.375	.250	.930	1.445	.330
50026	1.000	1.500	.375	.930	1.570	.455
50038	1.000	1.500	.500	.930	1.570	.610
50115	1.125	1.375	.250	1.055	1.445	.330
50039	1.250	1.500	.250	1.180	1.570	.330
50030	1.250	1.750	.500	1.180	1.820	.330
50035	1.250	1.750	.500	1.180	1.820	.610
50012	1.250	1.750	1.000	1.180	1.820	1.110
50008	1.250	1.875	.500	1.180	1.945	.610
50040	1.500	2.000	1.000	1.400	2.100	1.110
50018	1.625	2.000	.250	1.525	2.100	.330
50020	1.625	2.000	1.000	1.525	2.100	1.110
50017	2.000	2.500	.500	1.860	2.650	.610
50041	2.000	2.500	1.000	1.860	2.650	1.110
50031	2.500	3.000	.500	2.375	3.125	.610
50042	2.500	3.500	1.000	2.313	3.688	1.188
50043	2.500	4.000	1.000	2.313	4.188	1.188
50044	3.000	4.000	1.000	2.813	4.188	1.188

When ordering use complete core code number consisting of Part Number suffixed by Material Code. Example: #50011-2A is 1.000 ID x 1.250 OD x .125 h x .002" Orthonol.

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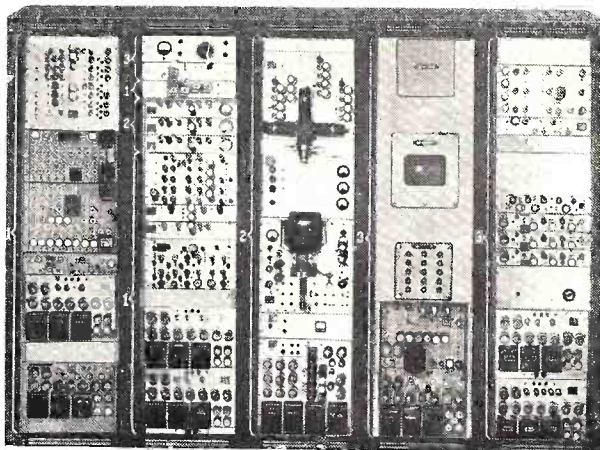
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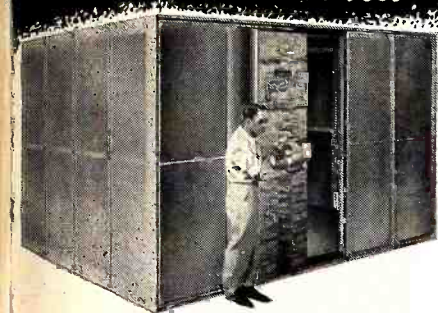
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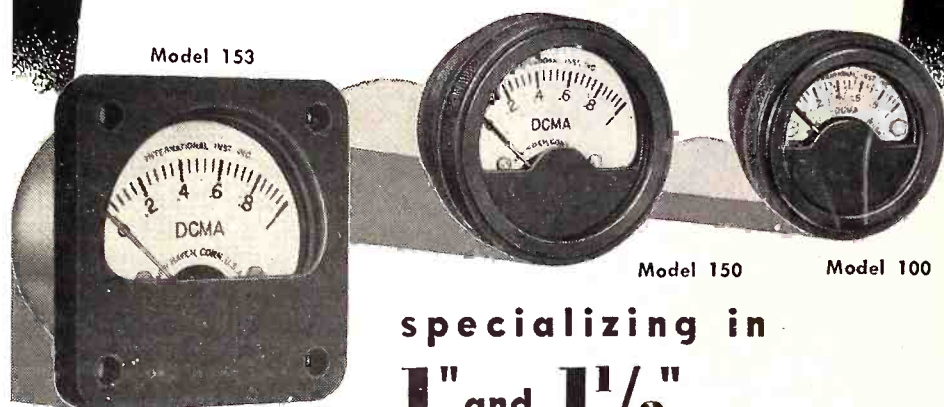
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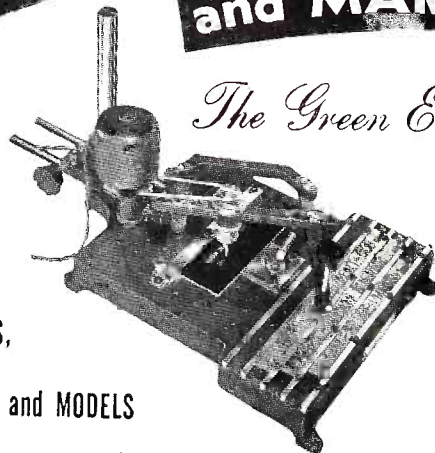
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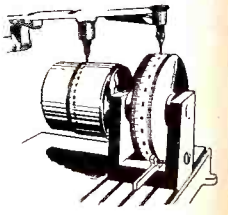
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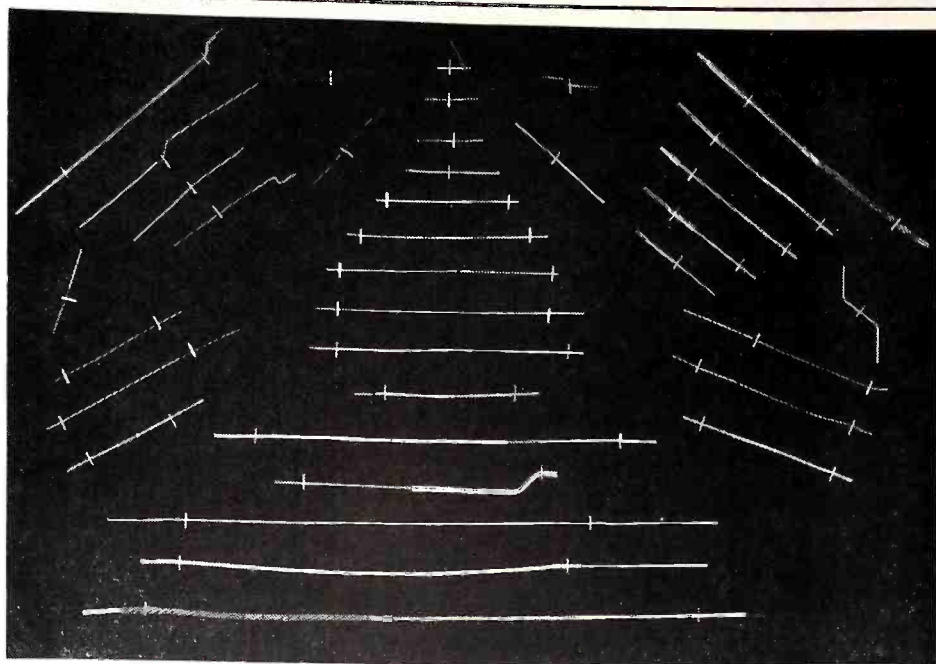
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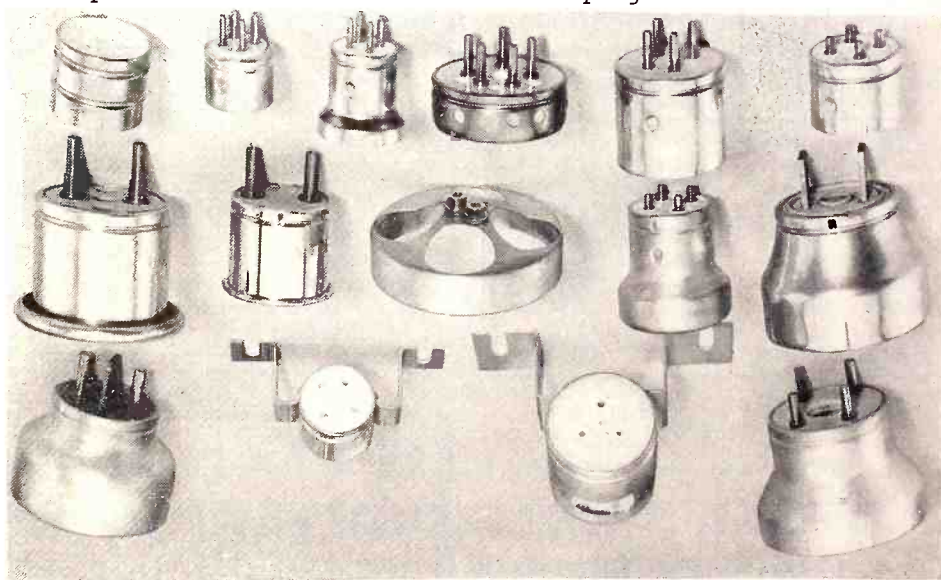
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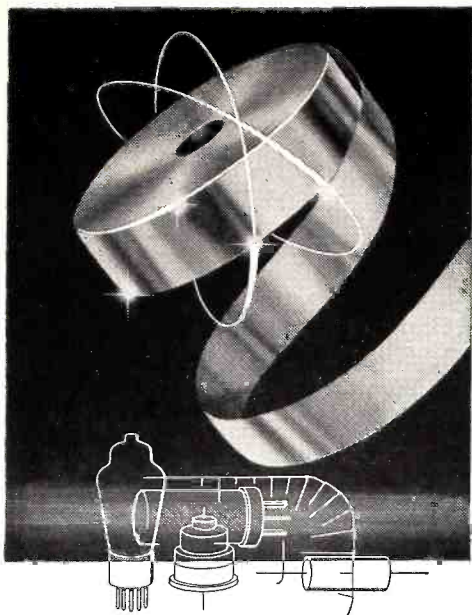


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.00025	41,000	.0010	10,250
.00030	34,000	.0015	6,800
.00035	29,200	.0020	5,100
.00040	25,600	.0025	4,100
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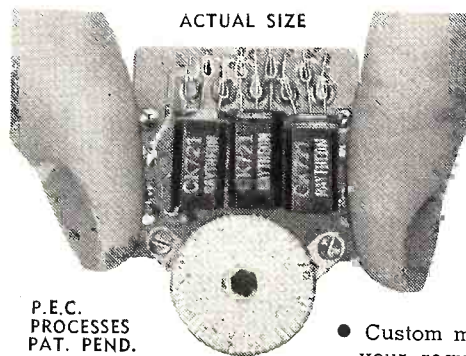
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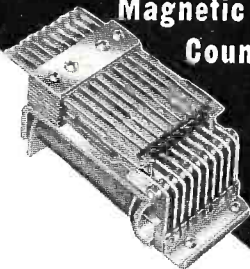
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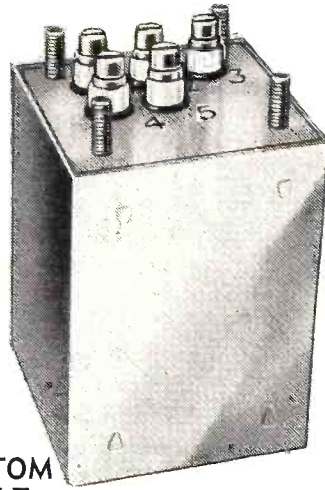
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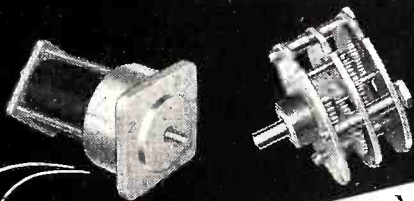
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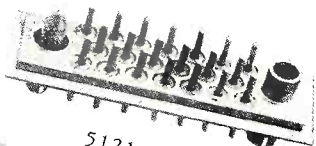
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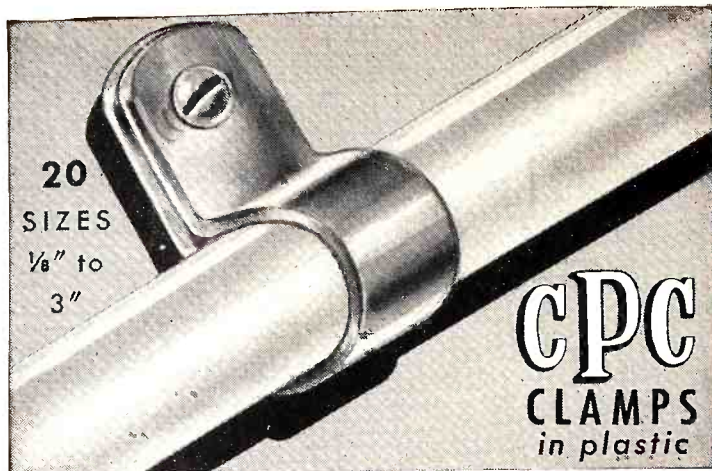
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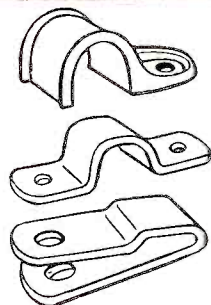


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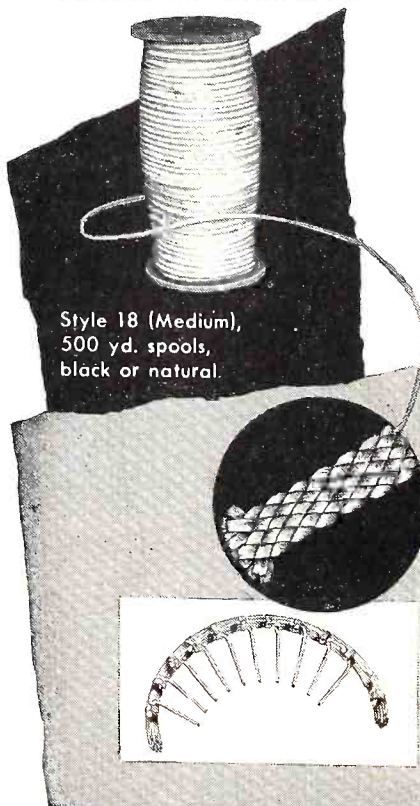
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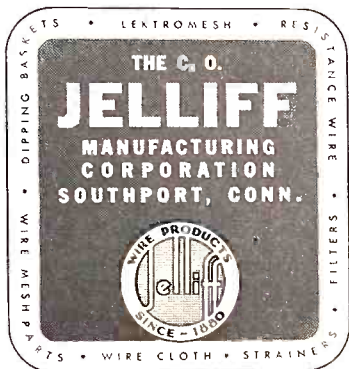
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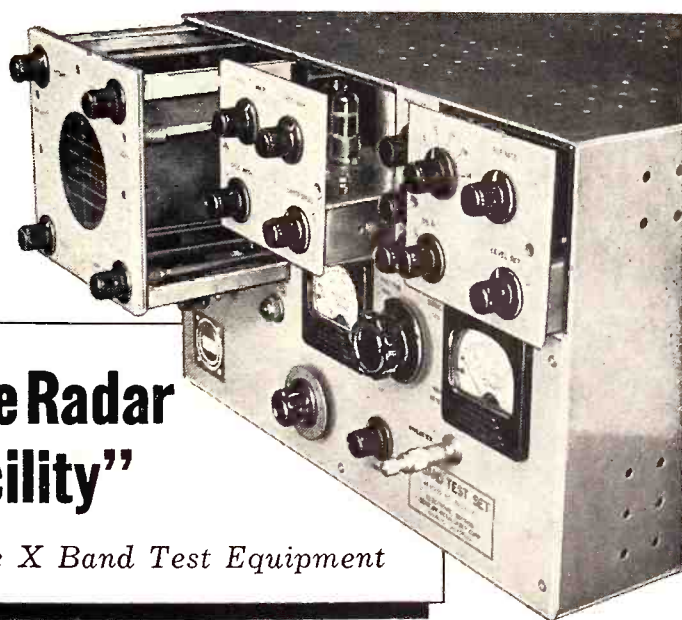
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CONTINUOUSLY VARIABLE

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Also available for standard rack mounting (Model 50-R. Panel size 10 $\frac{1}{2}$ " x 19". Depth 14 $\frac{1}{4}$ ".)

Specifications*

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- 0-500 VDC, 0-500 MA
- Regulation (line): . . . < 0.15%
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- Internal Impedance: . . . < 2 ohms
- Ripple and Noise: . . . < 8 mv rms
- Polarity: + or - may be grounded
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- 6.3 VAC, 5A unregulated
- STABLE • DEPENDABLE
- MODERATELY PRICED

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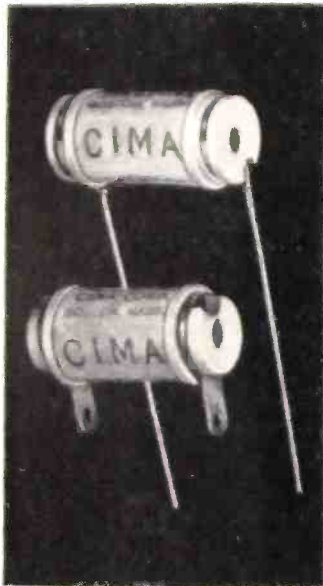
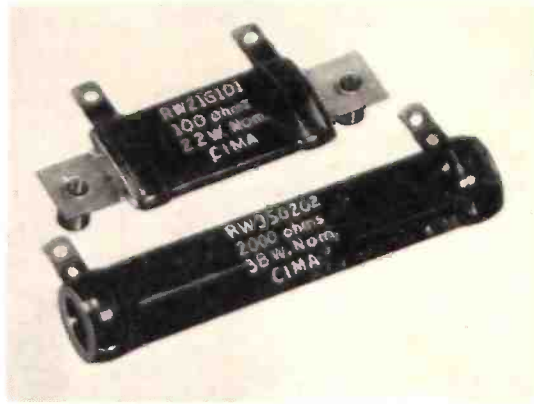
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CORONA 68, NEW YORK

*For complete specifications on these and other models write for catalog 50-EBG

VITREOUS ENAMEL RESISTORS

Manufacturers of resistors conforming to JAN-R-26-A specifications in stack mounting types RW20 thru RW24 and in tubular types RW29 thru RW47 in characteristics G & J. Also commercial type wire wound resistors from 5 watts to 200 watts in fixed and adjustable styles made to your specifications.

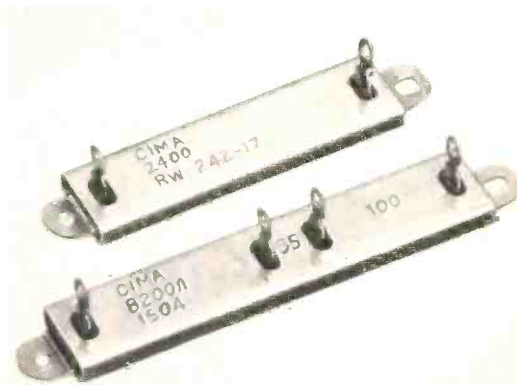


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For use where high resistance, low temperature coefficient of resistance, close tolerance and non-inductive balanced windings are required. Sturdy terminal construction with lug or wire leads. High resistance to moisture and accuracies to 0.1%.

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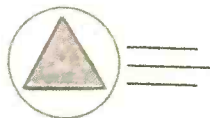
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VAC 1 ϕ motor at
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8500 RPM at 40
cps. With 2" Ja
10,000 RPM
400 cps. Motor
Dimensions: 1.5
dia. x 1.75" long



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free air With 6
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With 28 V.D
motor, 35 CFM



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Blower 20 CF
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Output Voltage:

Continuously variable 0 to 600 pos. or neg. volts.

Output Current:

0 to 300 MA at any voltage setting.

Regulation:

Output voltage varies less than 0.1% for any condition of line or load.

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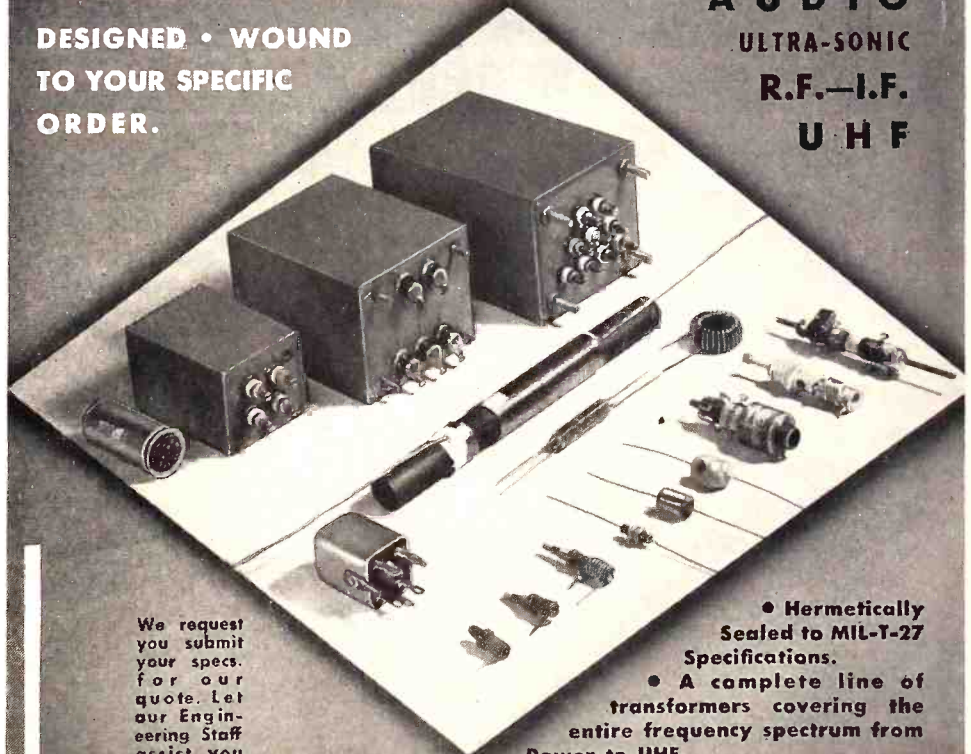
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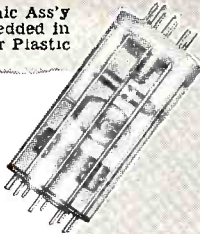
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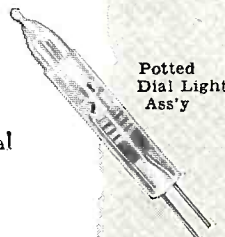
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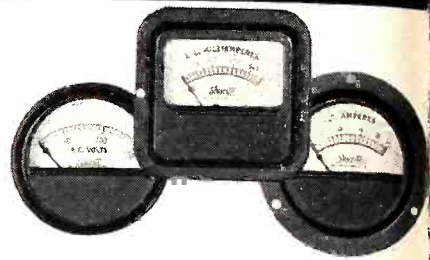
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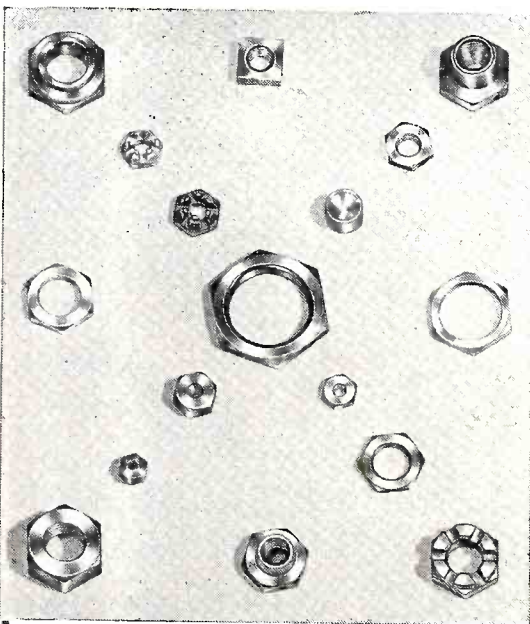
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PART NUMBER	Wattage	Maximum Rated Voltage	Resist. Range	* DIMENSIONS	
				Length A	Dia. B
DC-1/4	.125	250	4 Ω 250 K Ω	9/32"	5/64"
DC-1/4	.25	300	5 Ω 1 Megs	17/32"	3/32"
DC-1/2	.5	500	6 Ω 5 Megs	13/16"	11/64"
DC-1/2A	.5	350	3 Ω 2.2 Megs	19/32"	11/64"
DC-1/2B	.5	500	3 Ω 5 Megs	11/16"	15/64"
DC-1/2C	.5	350	2 Ω 1.1 Megs	15/32"	11/64"
DC-1	1	500	3 Ω 10 Megs	15/16"	9/32"
DC-2	2	750	10 Ω 50 Megs	2 1/16"	9/32"

* Lead Length C—Lengths of leads for all resistors shown above are 1 1/2 inches.

Hermetically Sealed Resistors Are Available in 6 Sizes From 1/4 Watt to 2 Watts.



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2500

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RANGE 20 cps to 200,000 cps

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LOW POWER FACTOR
RANGE 20 cps to 20,000 cps

FOR MEASUREMENT of VOLTS • AMPS • WATTS

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- VOLTAGE RANGE: FULL SCALE 0.1V to 300V.
- CURRENT RANGE: FULL SCALE .001 to 30A.

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- VOLTAGE RANGE: FULL SCALE, 1.5V to 600V.
- CURRENT RANGE: FULL SCALE, .0015A to 30A.

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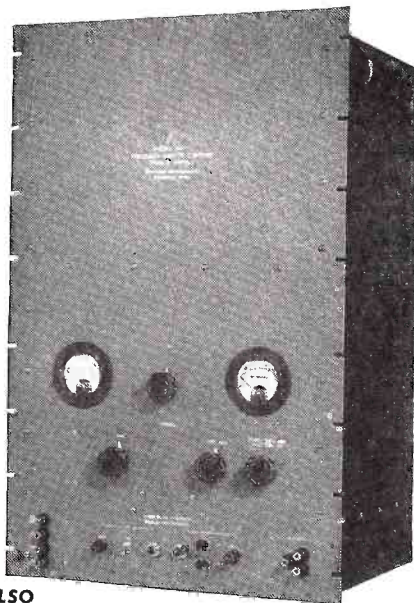
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- MORE STABLE THAN BATTERIES.
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- For nuclear work.
- High stability — close regulation.
- Electronically regulated.
- High voltage — low current.

MODEL 400B. — Output: 1000 to 5000 vdc. Current: 0 to 1 ma. Regulation against line voltage 105 to 130 v. is within .01%. Regulation against load is .01%. Short term stability is .01% — long term stability is .1%. Ripple less than .01%.

MODEL 400C. — Same as 400B except output: 500 to 1500 vdc.

These models available with positive side grounded.



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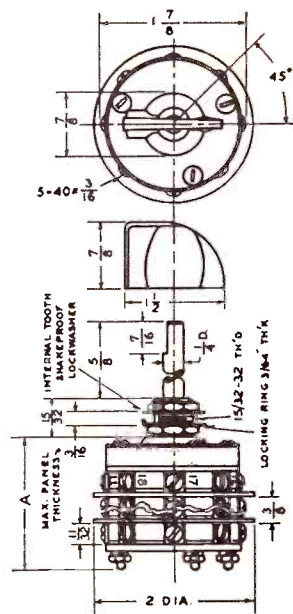


It can be furnished for continuous rotation, in both directions, through eight positions, or can be provided with movement limited to from two to eight positions. An important advantage of the Type-A switch is that it has an exceptionally sturdy detent mechanism that assures positive positioning of the switching elements at all eight positions.

Movable contacts carried on molded-phenolic rotors engage fixed contacts distributed around the circumference of recessed, molded-phenolic disks so constructed that the make and break action is wholly contained within an insulating enclosure. Assemblies of fixed and movable contacts to suit varied switching needs can be combined so that as many as seven different sections can be controlled by a single knob.

ELECTRICAL RATINGS — TYPE-A SWITCH		
Service	Amperes	Volts
Continuous current	10 a-c/d-c	125
	5 a-c	125
Interrupting	0.75 p. f. lamp load	125
	3 a-c	125
	5 d-c	30
	1 d-c	125

Heavy-duty rotary switches rated at 10, 30, 60, 100, or 200 amperes are also available from ESCO. Bulletins giving detailed specifications on all ESCO switches will be furnished on request.



SECTIONS	DIM. A	APPROX. WEIGHTS
1	1 1/16	3 oz.
2	1 7/16	4 oz.
3	1 13/16	5 oz.
4	2 3/16	6 oz.
5	2 9/16	7 oz.
6	2 15/16	8 oz.
7	3 5/16	9 oz.

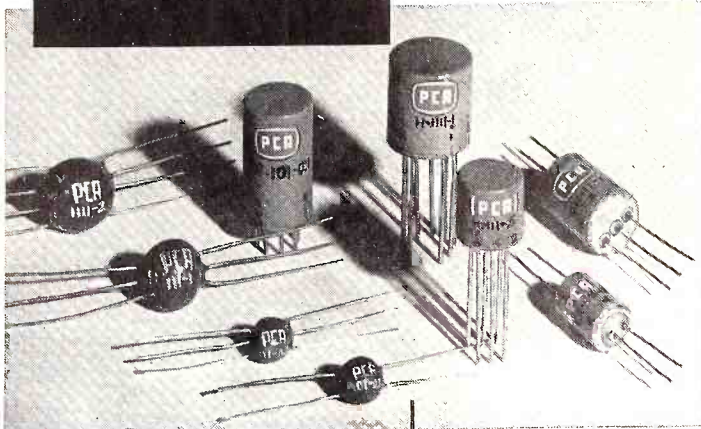


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PULSE TRANSFORMERS**

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Rise times less than
.005 microseconds!
2, 3, and 4 windings,
tapped if desired!



Developed for radar, missile and computer circuits. New design techniques and the use of highly stable special iron cores have enabled PCA to produce, in quantity, the world's smallest, most efficient pulse transformers.

The new units are hermetically sealed, and are impregnated or imbedded in a special plastic. They will not support combustion, and can operate indefinitely at temperatures ranging from -70° C. to $+125^{\circ}$ C. Leads will withstand a five pound pull.

For complete specifications
write to:
PCA ELECTRONICS, INC.



TYPICAL SPECIFICATIONS:

Model No. 101-0.1
Pulse width 0.1 microsecond
Rise time005 microseconds
Weight less than .03 ounces
Size 11-32" diameter
The MPT 101-0.1 meets MIL-T27 test specifications, including Table 1A Humidity Resistance Tests, and is resistant to corrosion.

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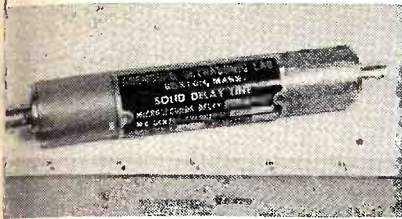
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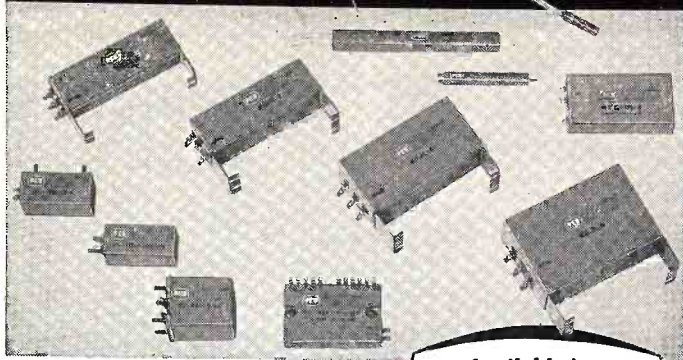
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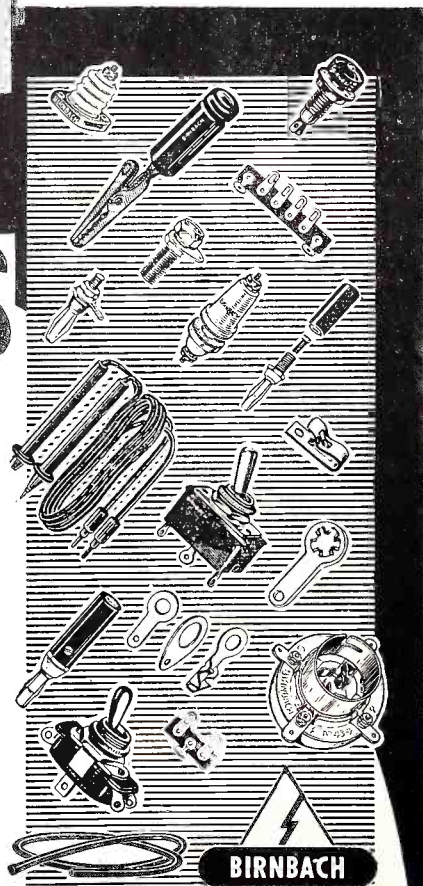
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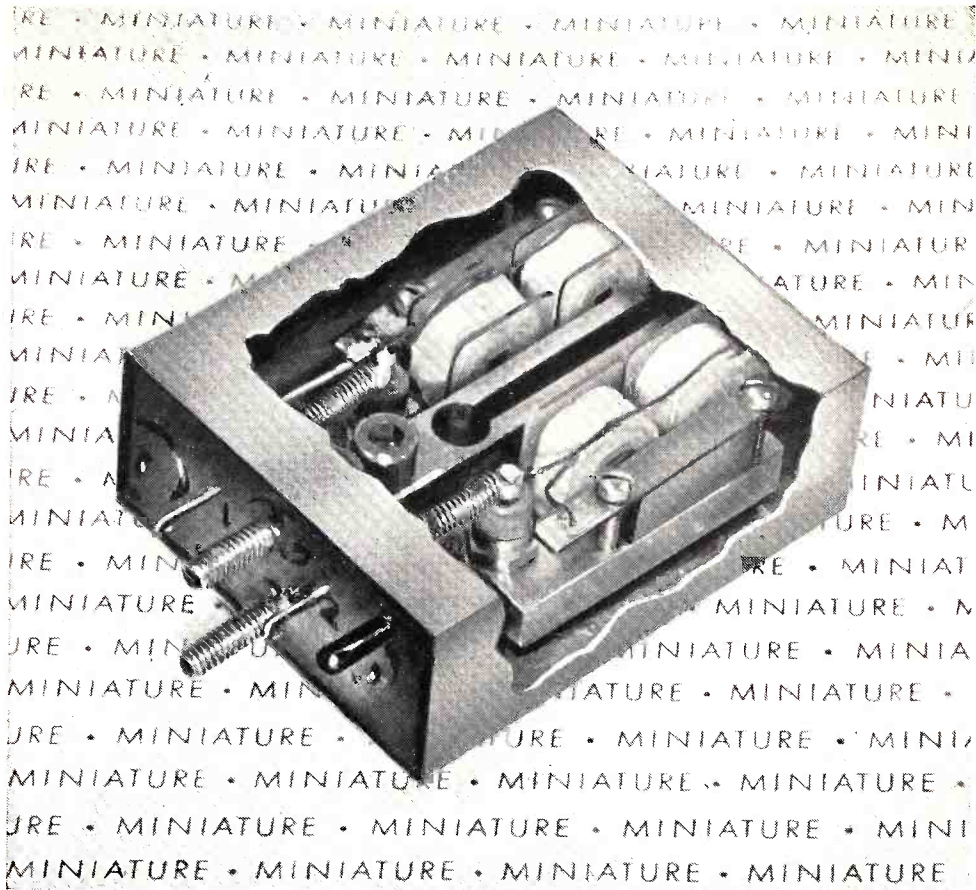


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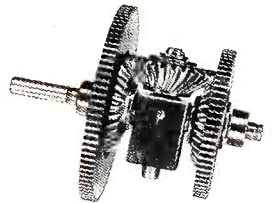


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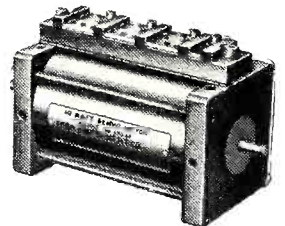
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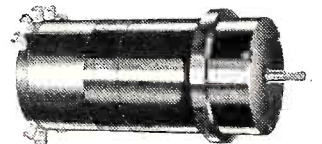
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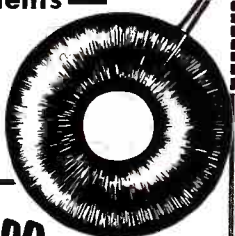
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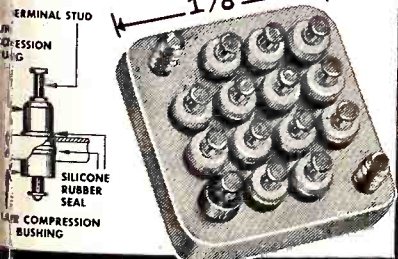
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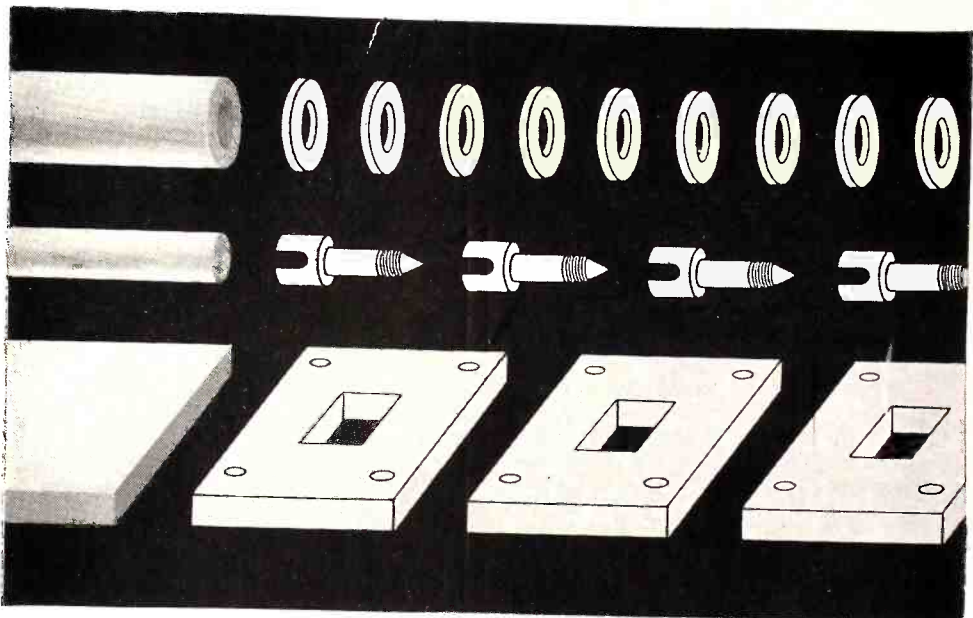
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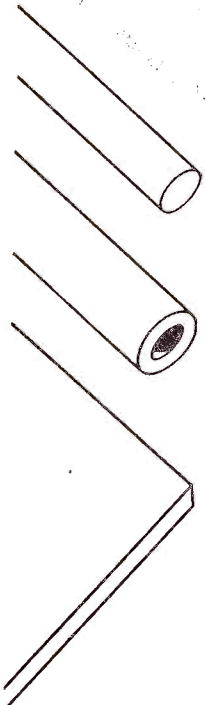
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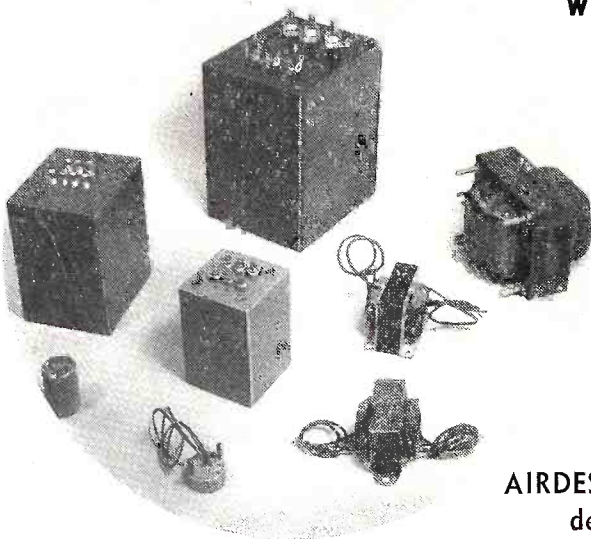
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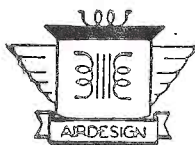
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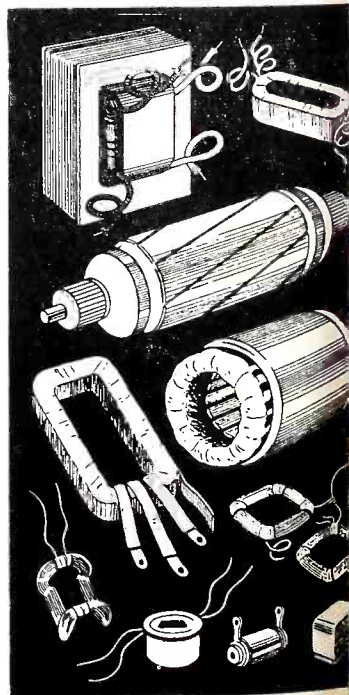
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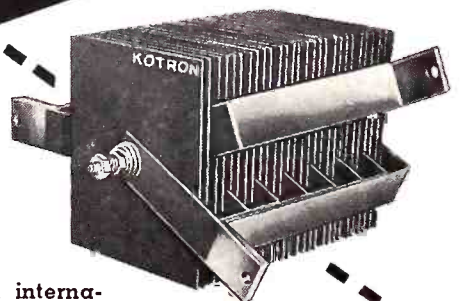
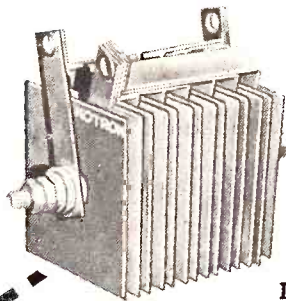
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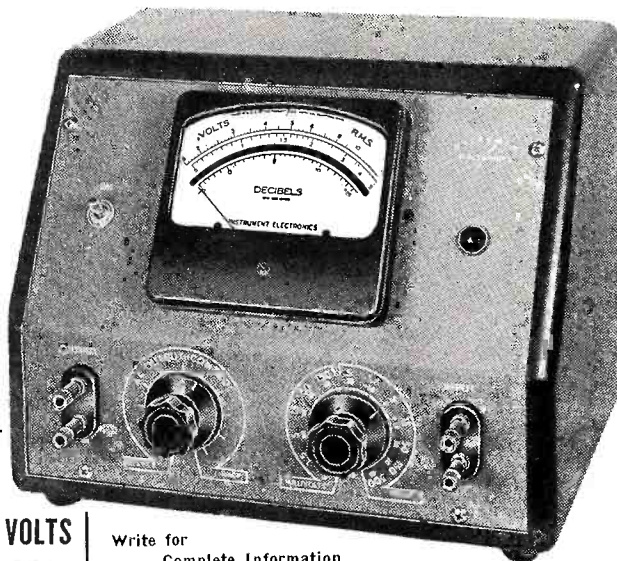
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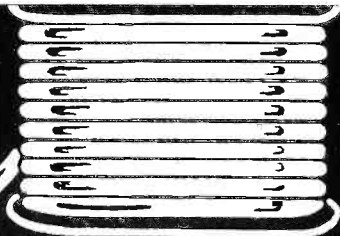
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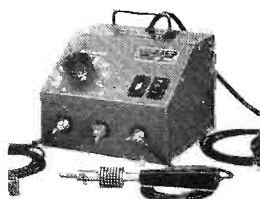
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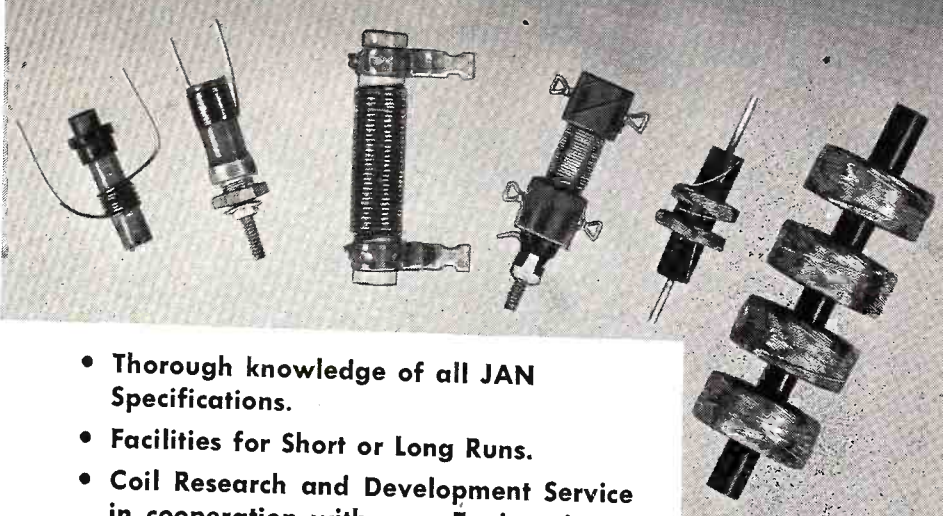
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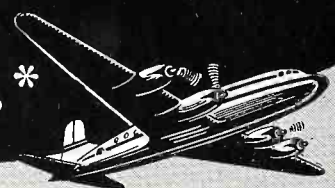
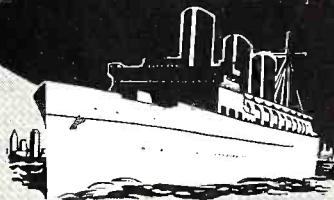
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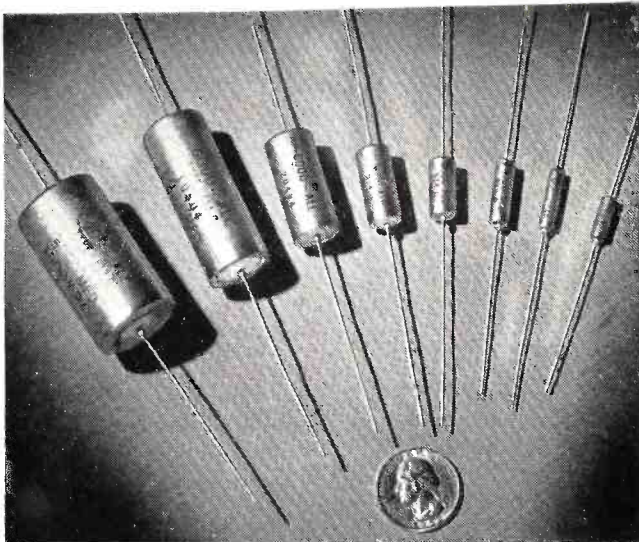
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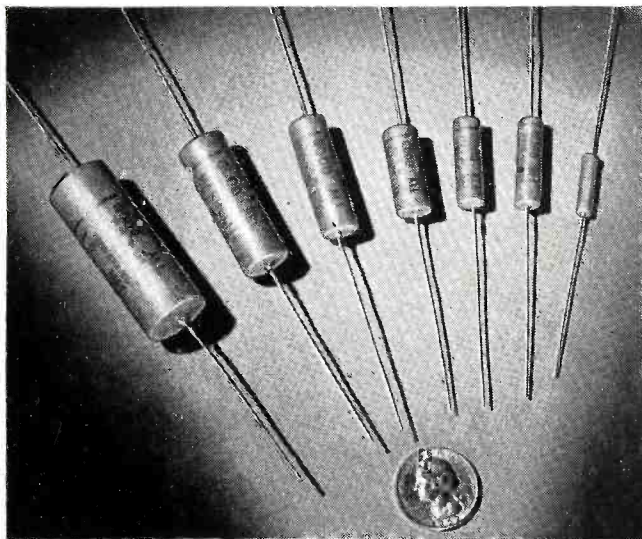
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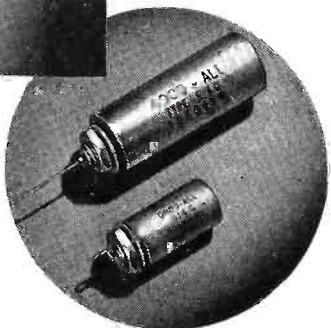


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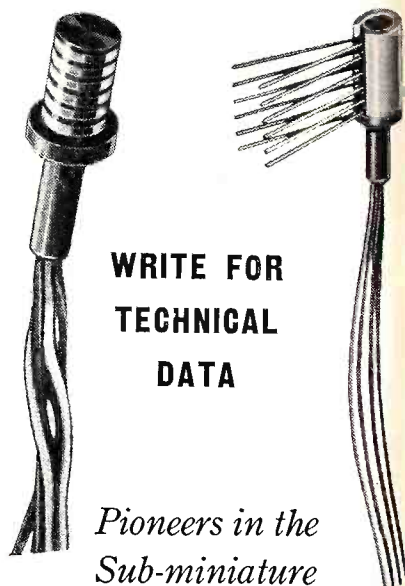
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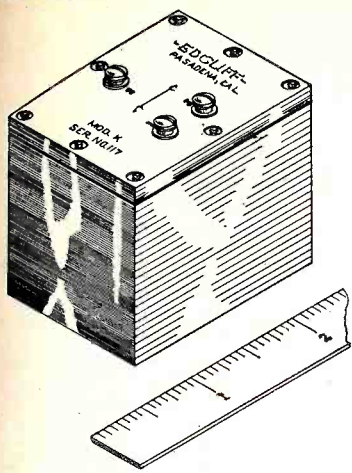
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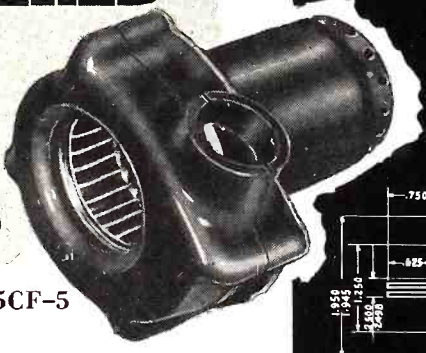
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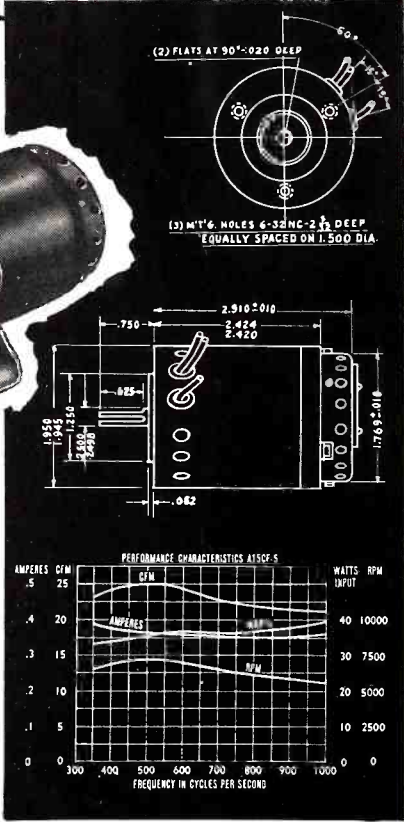
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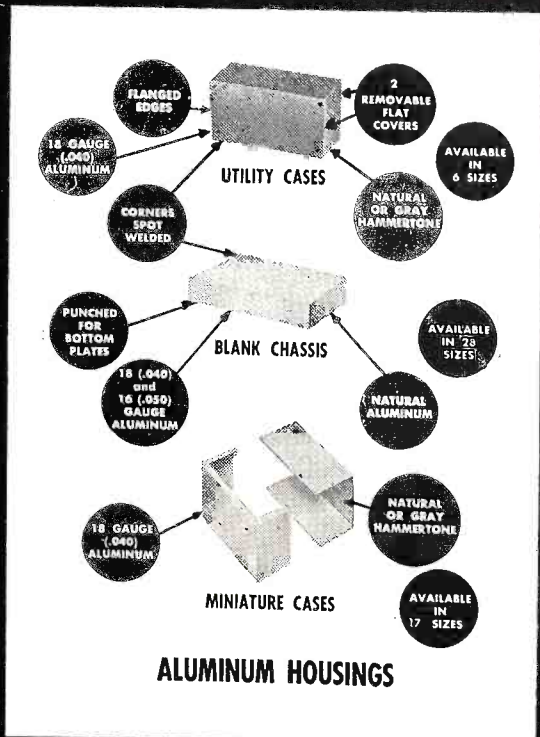
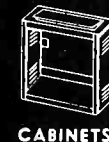
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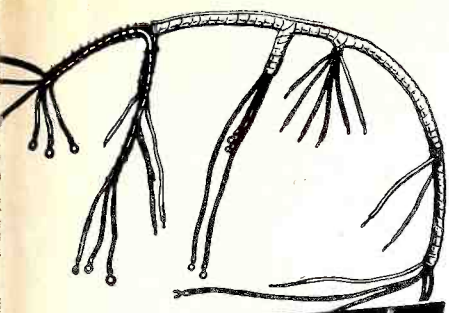
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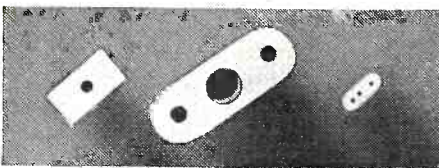
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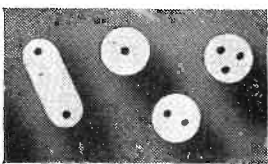
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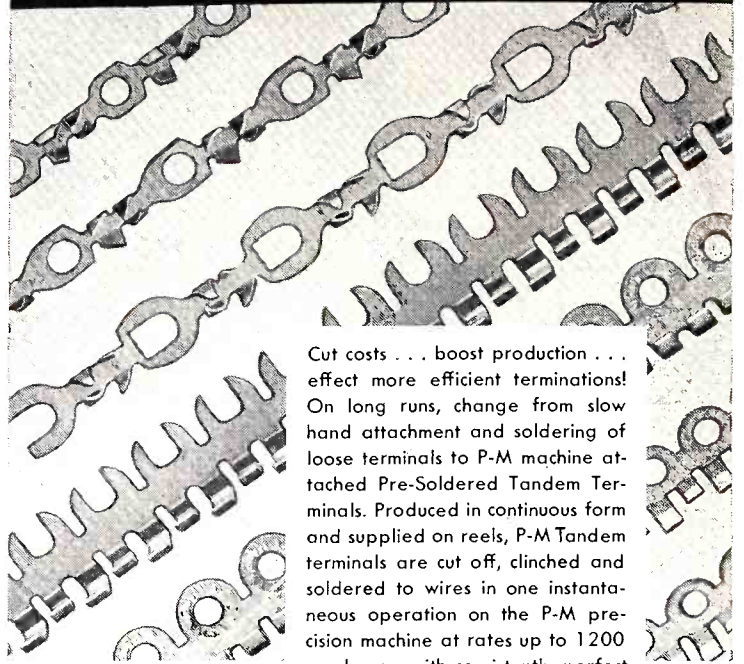


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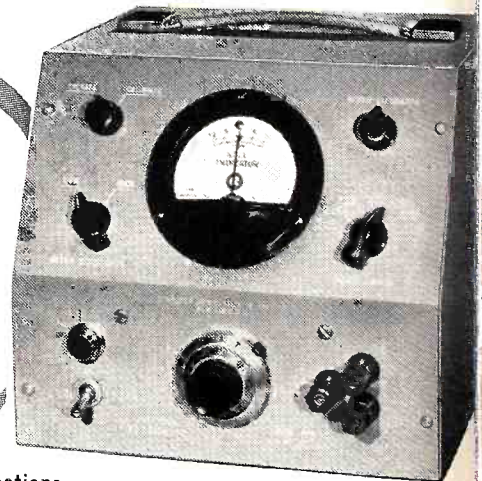
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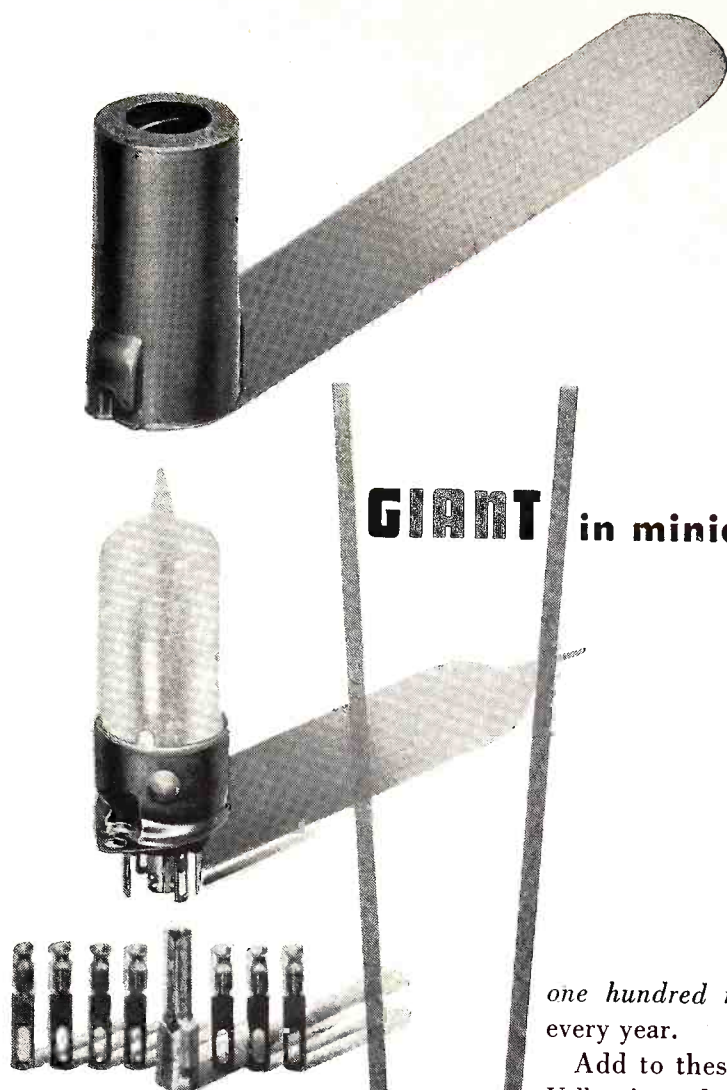
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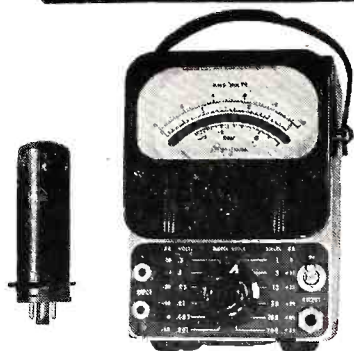
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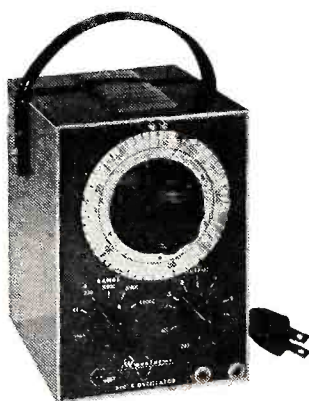
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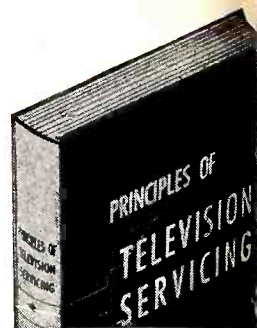
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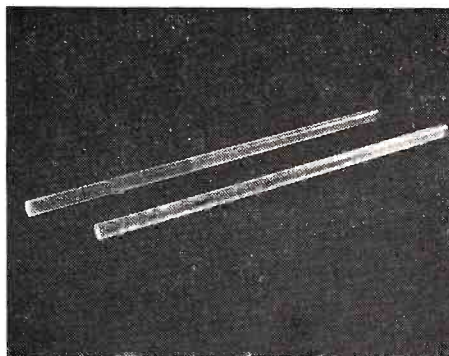
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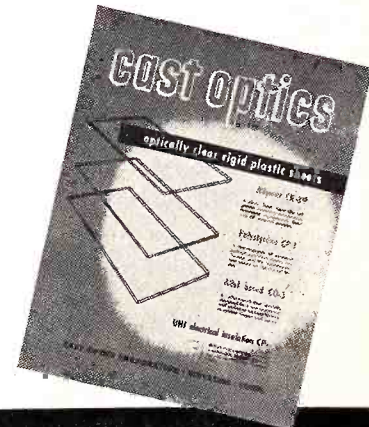
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Tensile Strength	9000	6500	5500
Compressive Strength	18750	13000	22000
ELECTRICAL-Volts/Mil			
Dielectric Strength	600	600	560
Dielectric Constant	60 Cps. 2.4 10 ⁸ Cps. 2.4 10 ⁹ Cps. 2.4	2.6 2.6 2.6	3.45 3.5 3.6
Power Factor	60 Cps. 0.0006 10 ⁸ Cps. 0.0006 10 ⁹ Cps. 0.0006	0.0002 0.0002 0.0002	0.019 0.014 0.06
THERMAL			
Thermal Conductivity °C./cm. x 10 ⁻⁴	2.50	1.90	4.9
Heat Distortion °F.	230° F	170° F	225° F
STABILITY			
% Water Absorption 24 hr. at 25° C.	0.005	0.005	0.15
RESISTANCE TO:			
Water	Excellent	Excellent	Excellent
Acid*	All Conc.	All Conc.	All Conc.**
CRAZING RESISTANCE			
Mechanical or Chemical	Complete	Low	Complete
ABRASION RESIST.			
Falling Emery Test (Times Acrylic)	1	0.94	10.2

* Except Oxidizing Acids ** Conc. = Concentration

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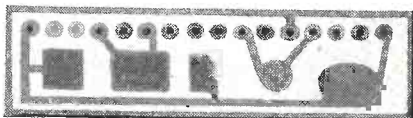
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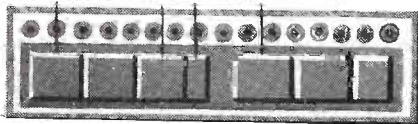
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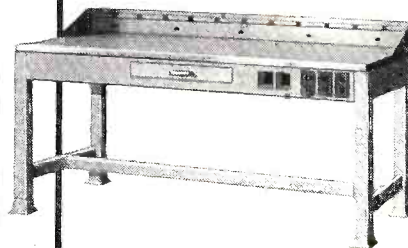
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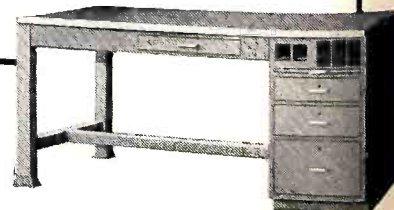
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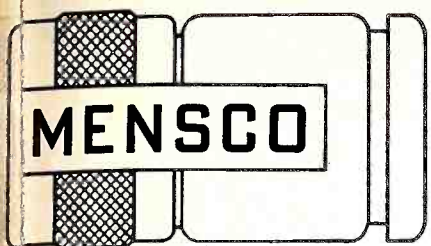
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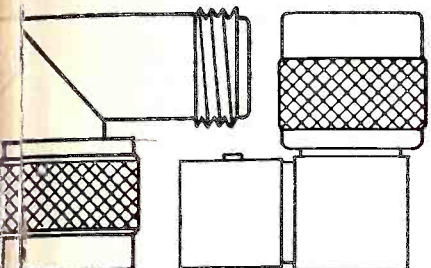


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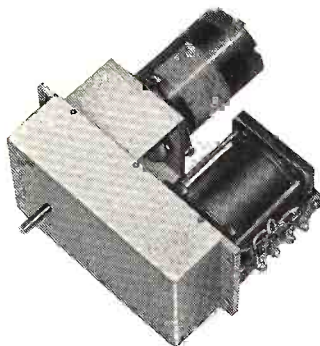
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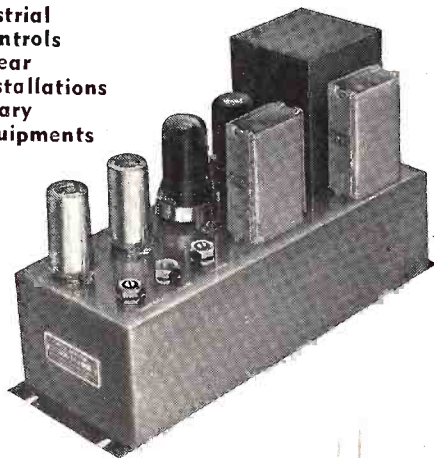
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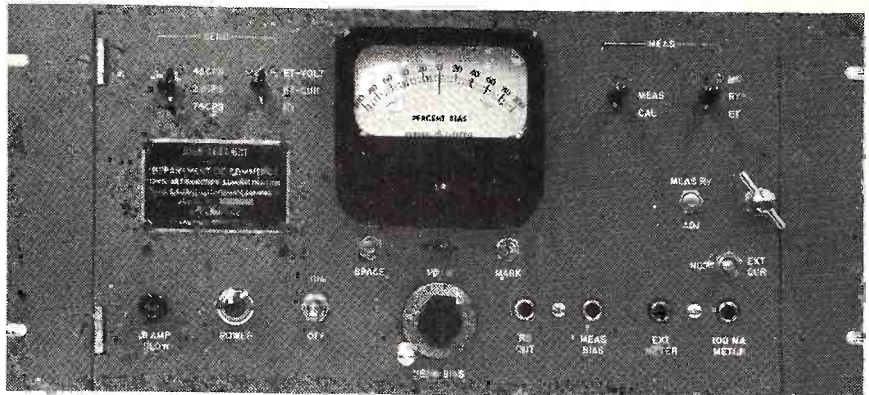
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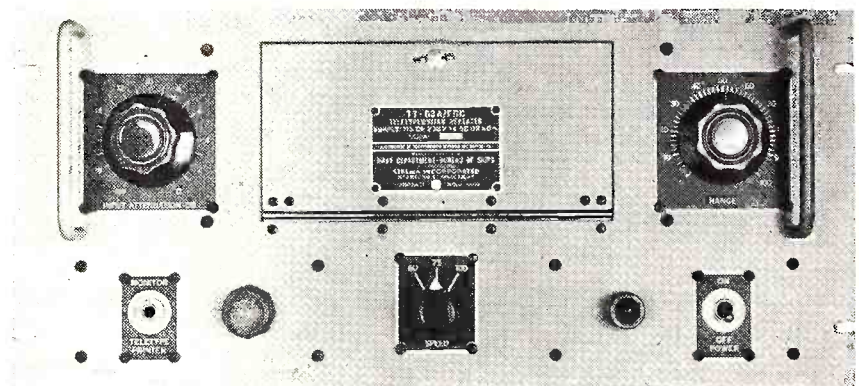
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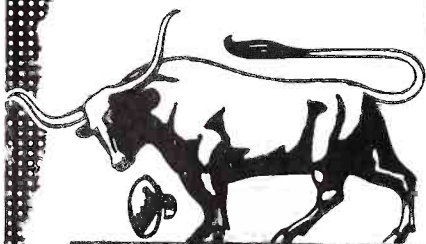
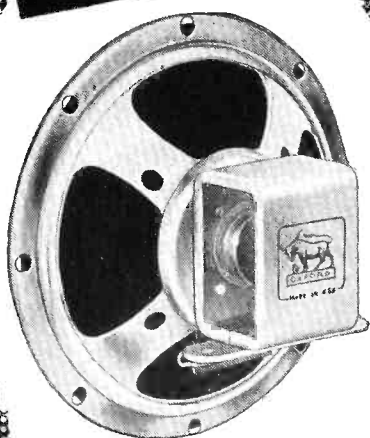
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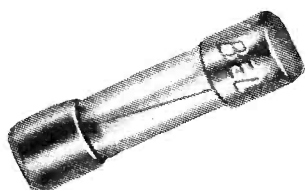
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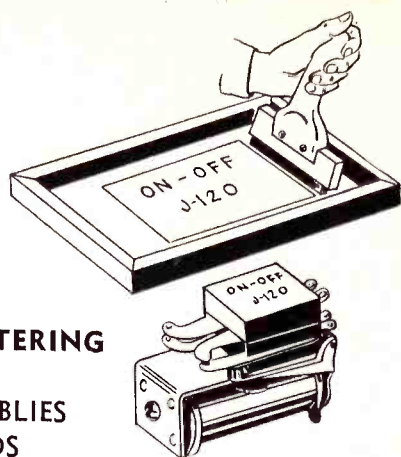
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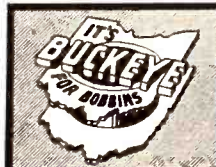
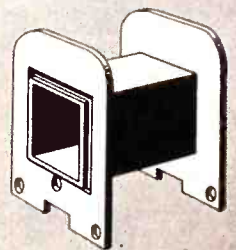
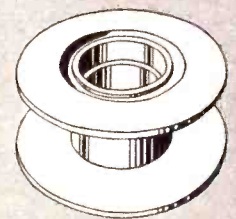
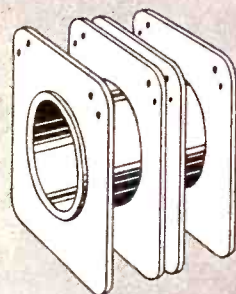
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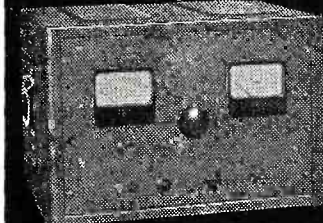
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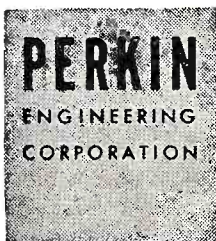


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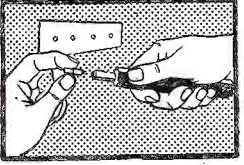


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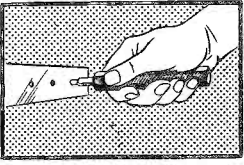
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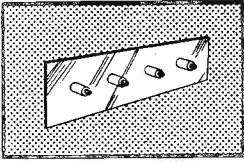
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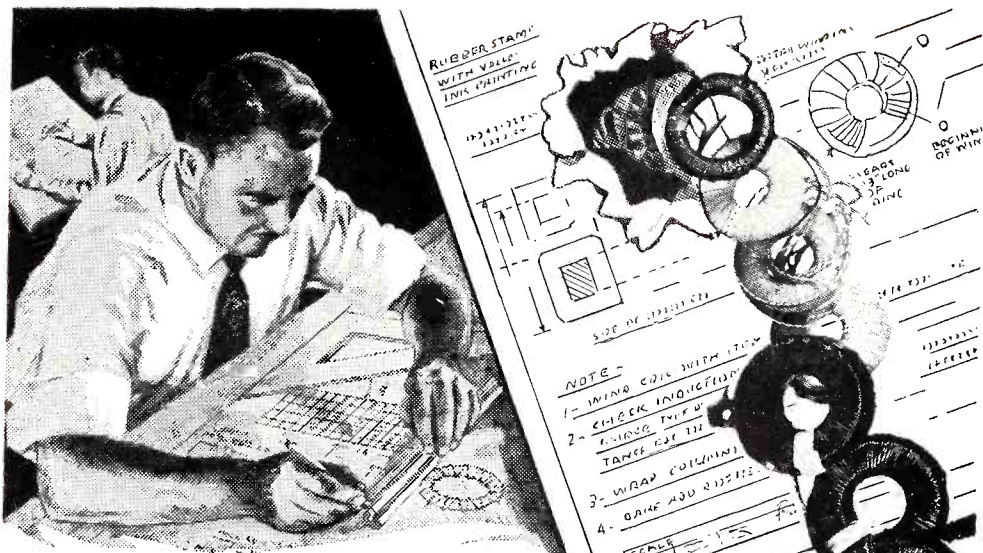
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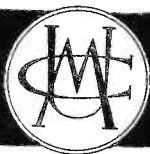
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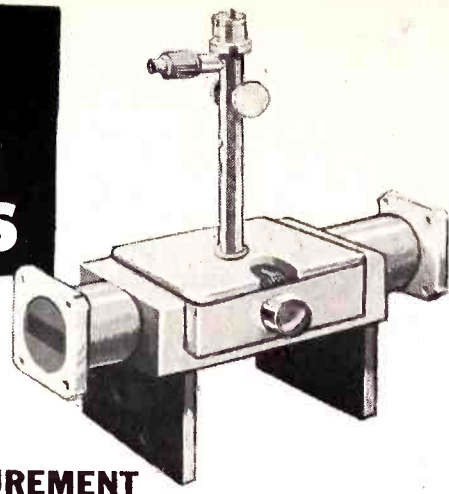
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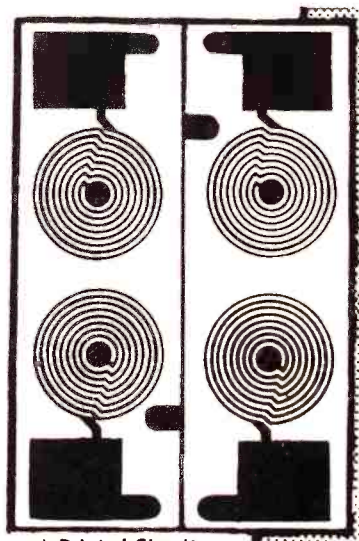
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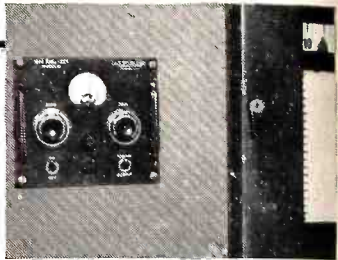
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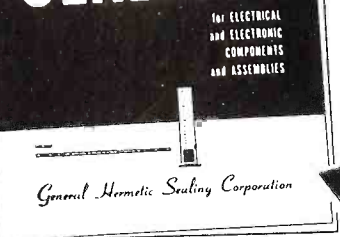
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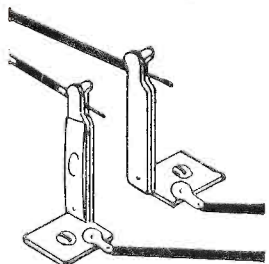
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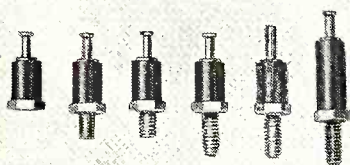


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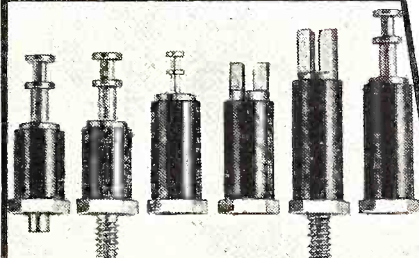
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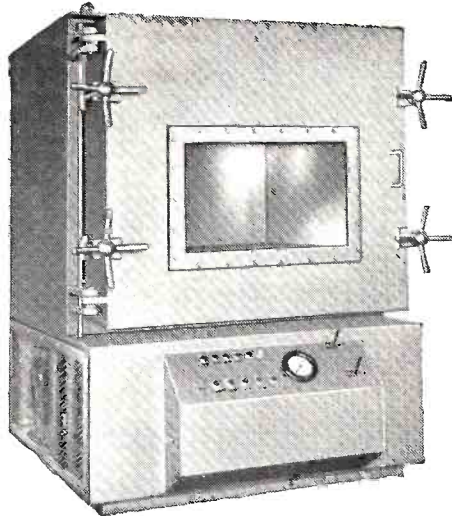
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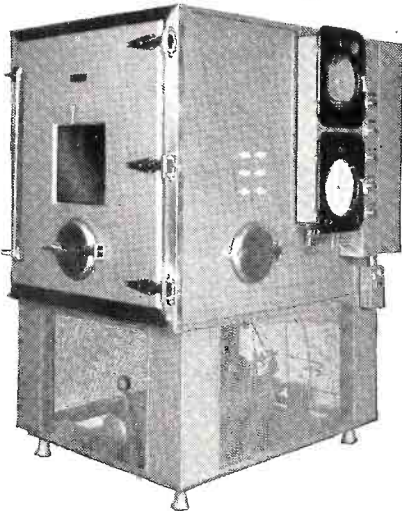
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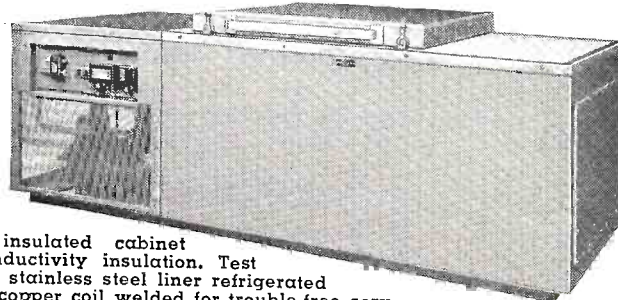
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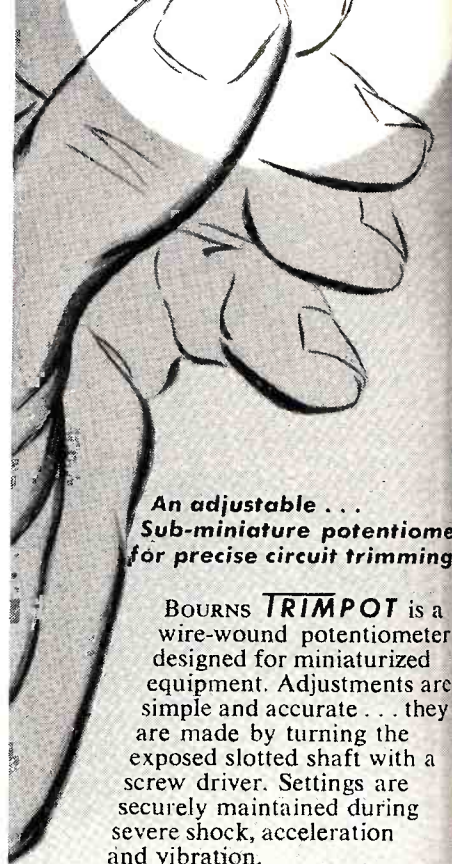
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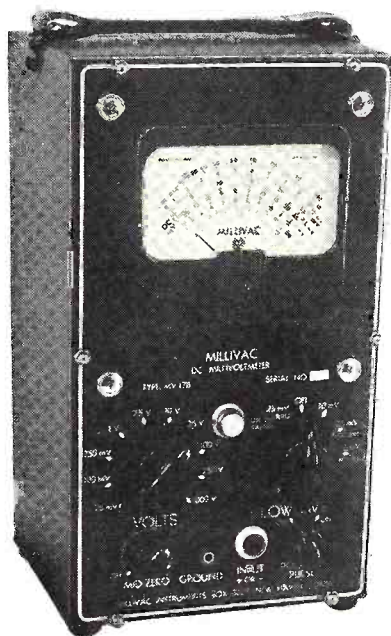
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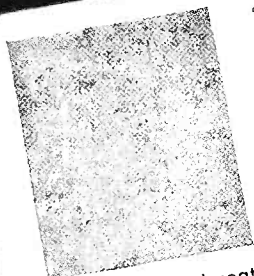
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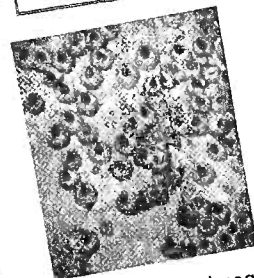
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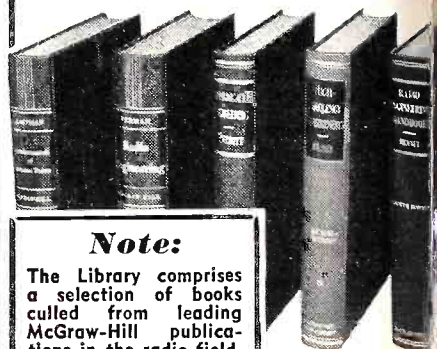
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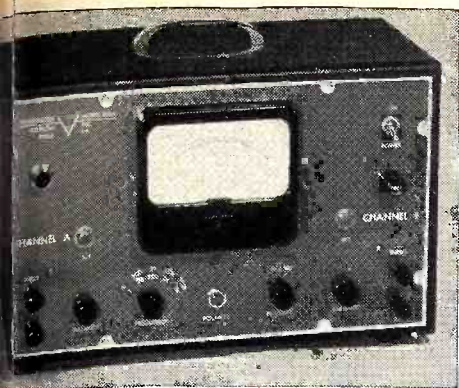
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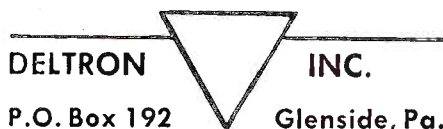
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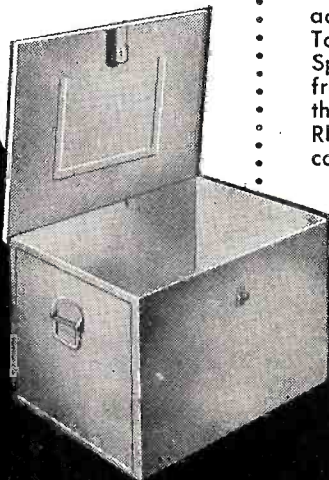
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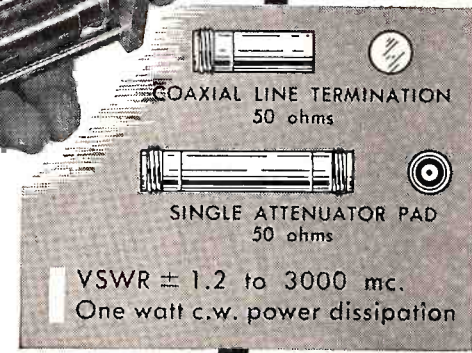
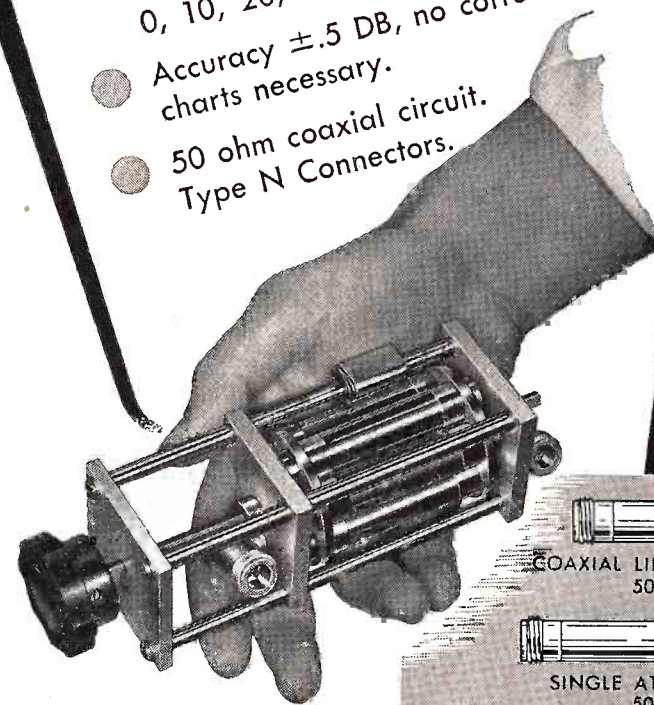
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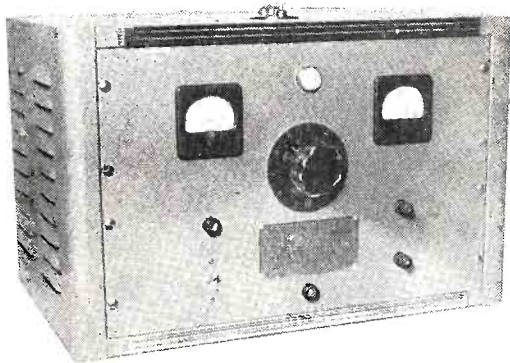
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1028F5	0-28	10	5%
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2028	0-28	20	Unfiltered
2028F5	0-28	20	5%
2028F1	0-28	20	1%
2028F1/4	0-28	20	1/4%
3028	0-28	30	Unfiltered
3028F5	0-28	30	5%
3028F1	0-28	30	1%
3028F1/4	0-28	30	1/4%

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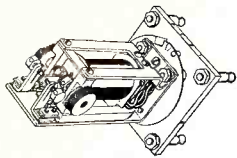
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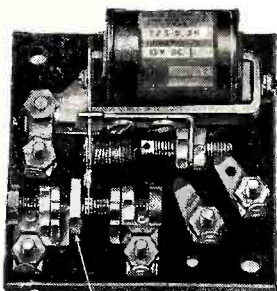
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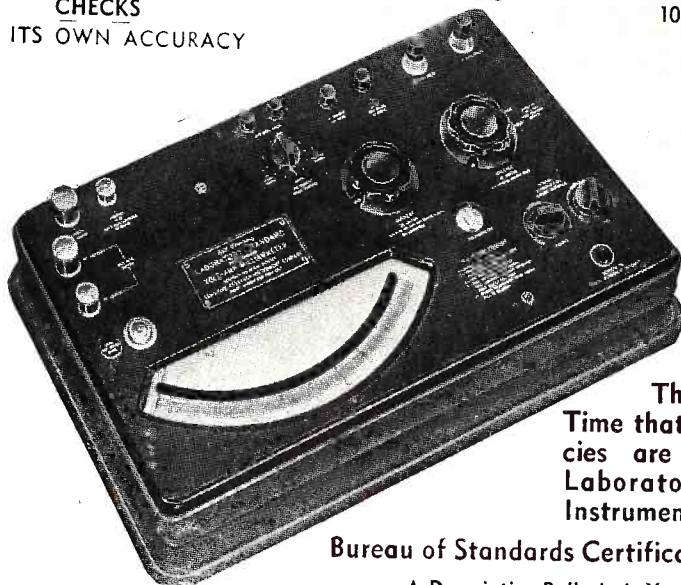
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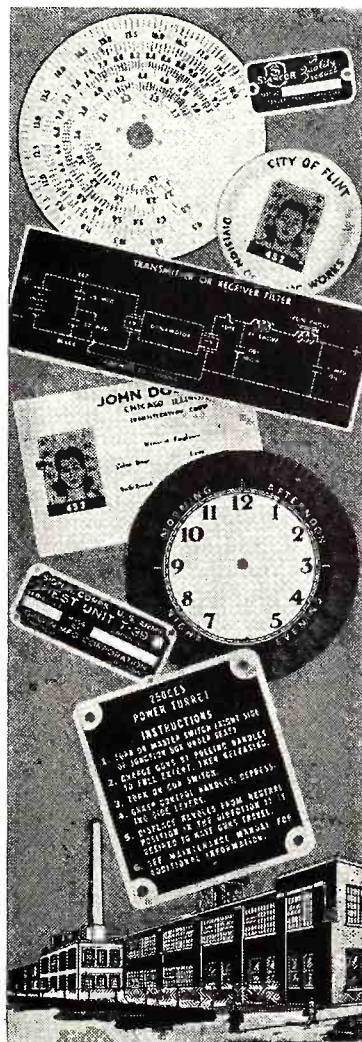
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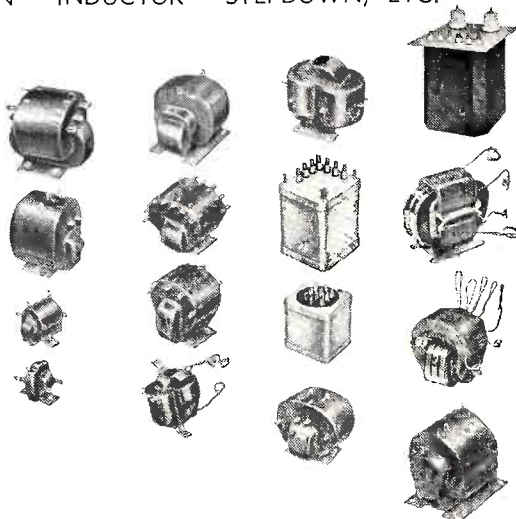
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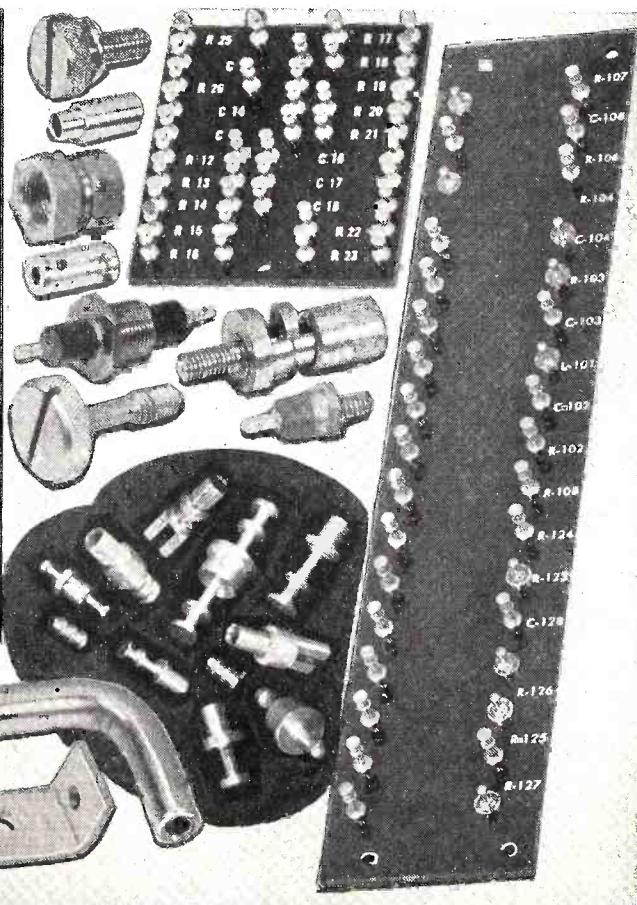
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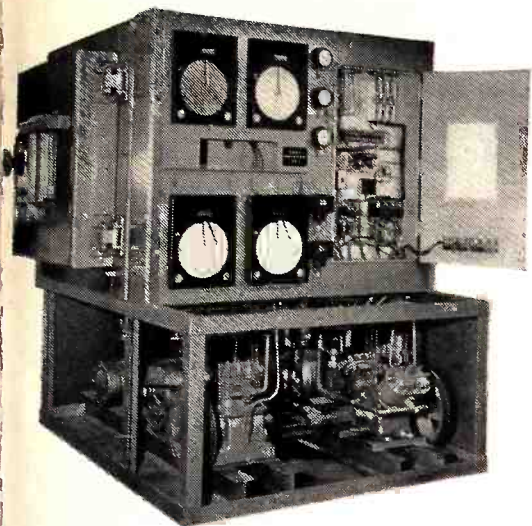
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Rise time:
Less than 10% of the time
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Construction: Distributed
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Overall size:
1" x 4" x 4".

Type 202 VECTORLYZER



Frequency Range:
8 cps to 2 mc through
panel binding posts, 20
kc to 500 mc through
probe.
Input Impedances:
Probe—2.5 uuf shunted
by 100,000 ohms, coaxial
arrangements for
matching low impedance
cables are available and will be furnished when
specified.
Binding Posts:—16 uuf shunted by one megohm.
Voltage Range:
Binding Posts—0.06, 0.6, 6, 60, and 600 volts
full scale.
Probe—0.6, 6, and 60 volts full scale.
Phase Angle Range:
0-180, and 180-360 degrees, ranges with better
angular sensitivity can be obtained through panel
adjustment.
Accuracy:
± 2% through panel binding posts, ± 1 db
through probe for phase angle measurements.
Power Supply:
115 volts rms ± 15%, 50-60 cycles, 80 watts.

Type 404A PHASE METER



Frequency:
External indicator—
100 kc to + 0 cps.
Panel Meter—100
kc to 0.001 cps.
Range:
36°, 90°, 180°, and 360° full scale, phase lead
or lag.
Input voltage:
0.5 to 300 volts from + 0 cps to 10 kc, then the
lower limit increases slowly up to 1 volt at 100
kc; better sensitivity can be obtained through
panel adjustment.
Accuracy:
± 1% or one degree from + 0 cps to 10 kc,
then increases slowly up to 4% or four degrees
at 100 kc with external indicator; an additional
error of + 1.5% at any operating frequency with
panel meter.
Waveform:
Any symmetrical or unsymmetrical periodic wave-
form does not affect the accuracy of the instru-
ment.
Input Impedances:
One megohm shunted with 16 uuf on the "Cathoda
Follower" input, and 24000 ohms shunted with
25 uuf on others.

TYPE 601 STEP VARIABLE DELAY LINE

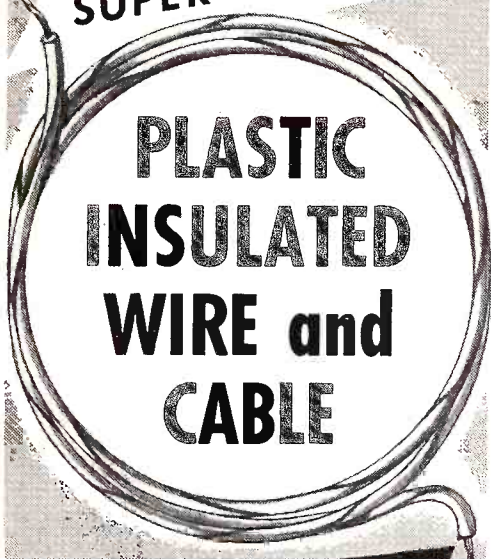


Time Delay: Variable in step of 0.2
microsecond up to 2.2 microseconds.
Impedance: 190 ohms nominal.
Cutoff frequency: 6.2 mc nominal.
Construction: Lumped parameter.
Overall size: 3" x 3" x 3".

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Thin wall vinyl insulation over flexible stranded conductors (AWG sizes down to #40) meets many requirements for small space factor. Available in all standard colors with or without wire braid shields.

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TUNGSTEN RIBBON

Sizes: Widths from .004" up to .125"
Thicknesses from .040" down to .001"

Down to .0008" at widths up to .060"
Down to .0005" at widths up to .015"
Down to .0002" at widths up to .006"
Tungsten ribbon made to above sizes is manufactured from round, ductile wire.
CHEMICAL PURITY: 99.9% pure
FINISH: Roll finish—black or cleaned
CAMBER: Approximately 1/16" in 2' lengths
EDGES: Slightly rounded and smooth

TOLERANCES:

Thicknesses:	.0005" to .001"	± .00005"
	.002"	± .0001"
	.003"	± .0002"
	.004"	± .00015"
	.005" to .006"	± .00025"
	.007" to .010"	± .00035"
	.011" to .030"	± .0005"
	.031" to .040"	± .001"
Widths:	.006" to 0.10"	± .0005"
	.011" to .020"	± .001"
	.021" to .030"	± .0015"
	.031" to .060"	± .002"
	.061" to .093"	± .003"
	.100" to .125"	± .005"

Supplied to mg. wgt.—if required.

STRIP

Widths up to 1½" with thickness down to .001" in random lengths 6" and up. This is rolled from heavy strip.

THORIATED

Widths up to .125" down to .001" thick
Widths up to ½" down to .002" thick
Wgt. per Sq. In. at .001" Thickness is 0.316 Grams

TANTALUM RIBBONS are available in sizes and tolerances similar to those shown for molybdenum. STRIP .001" down to .0005" at widths up to 2".

INQUIRIES ON FORMED PIECES MADE OF TUNGSTEN OR MOLYBDENUM RIBBON AND STRIP, OR THORIATED TUNGSTEN WILL RECEIVE PROMPT ATTENTION.

MOLYBDENUM RIBBON

Sizes: Widths from .006" up to .250"
Thicknesses from .060" down to .0006"

Molybdenum Ribbon made to above sizes is manufactured from round, ductile wire.

CHEMICAL PURITY: 99.9% pure

FINISH: Roll polished finish, cleaned

CAMBER: Approximately 1/16" in 2' lengths

EDGES: Slightly rounded and smooth

TOLERANCES:

Thicknesses:	.0006" to .001"	± .00004"
	.0011" to .010"	± .00025"
	.011" to .030"	± .0003"
	.031" to .060"	± .0005"
Widths:	.006" to .010"	± .0005"
	.011" to .020"	± .001"
	.021" to .030"	± .0015"
	.031" to .090"	± .002"
	.091" to .125"	± .003"
	.126" to .160"	± .0035"
	.161" to .250"	± .005"

Supplied to mg. wgt.—if required.

STRIP

Widths up to 2" with thicknesses down to .001" in random lengths 6" and up. This is rolled from heavy strip.

Wgt. per Sq. In. at .001" Thickness is 0.167 Grams

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5 W.	3½/32"	5/16"	.05 to 12,000
10 W.	17/8"	3/8"	.05 to 35,000

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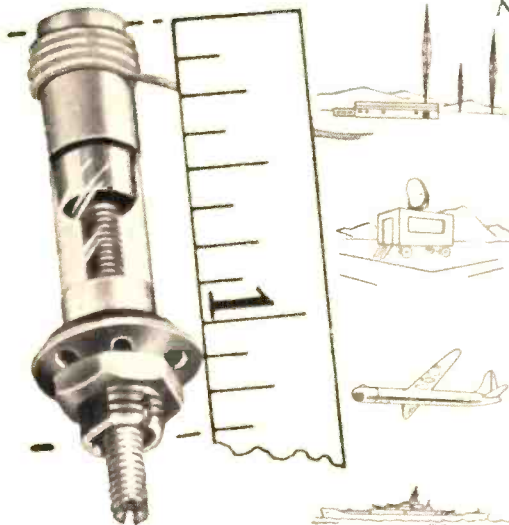
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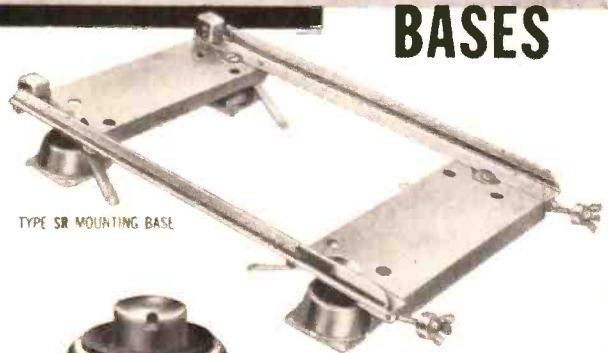
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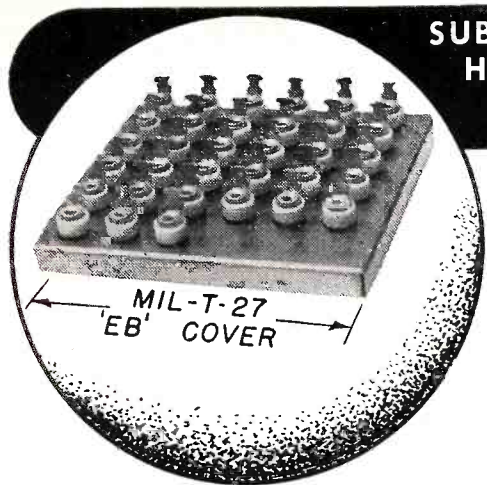


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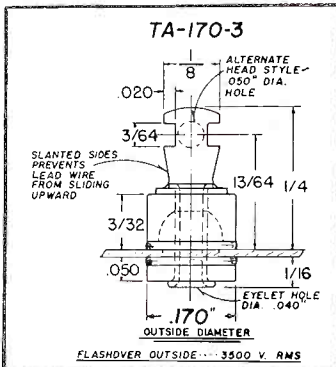
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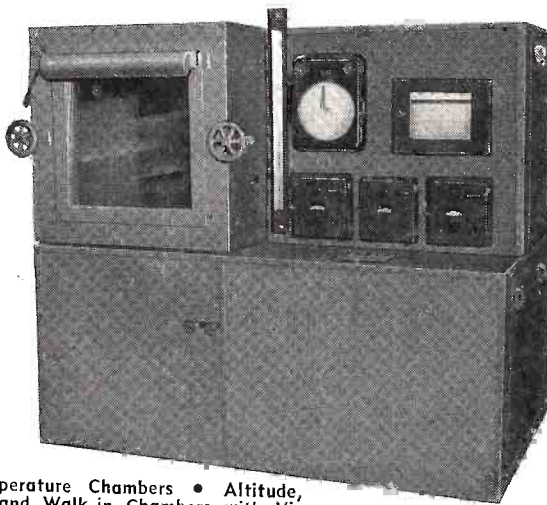
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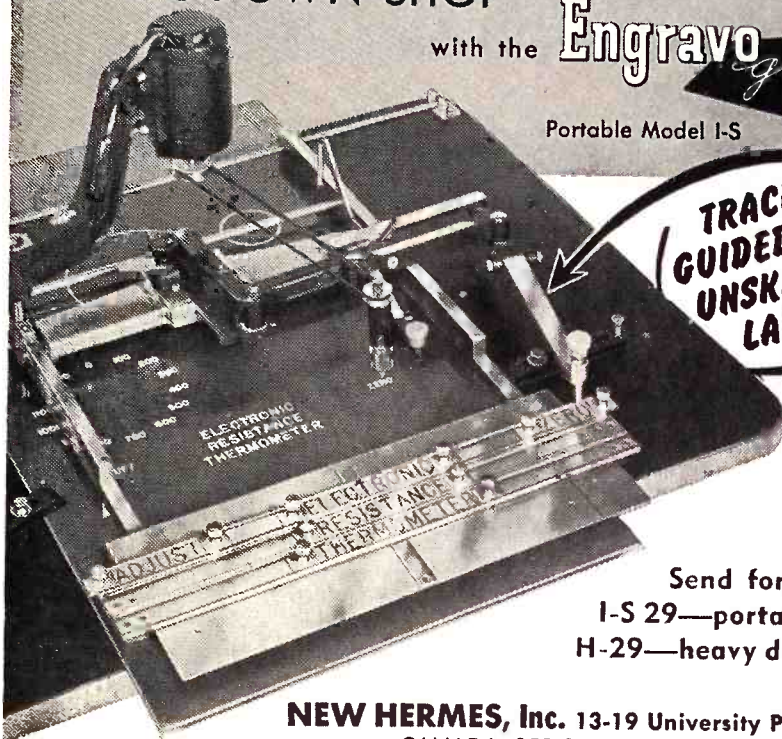
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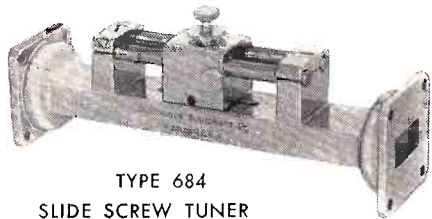
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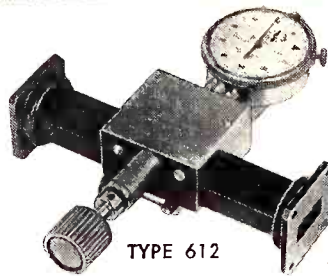
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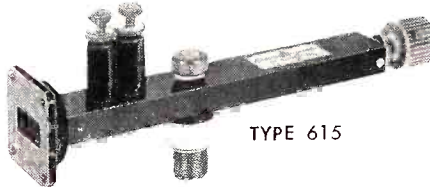
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GUIDE to dealers in

SURPLUS NEW and USED

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- Co.**, B.D., 310 Atlantic Ave., Boston, Mass.
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- Leru Laboratories, Inc.**, Black Oak Ridge Rd. & Jackson Ave., Wayne, N. J.
- Liberty Electronics, Inc.**, 135 Liberty St., N. Y. 6
- Life Electronic Sales**, 345 Broadway, N. Y. 13
- Line Hardware Co.**, 1515 N. 26 St., Phila. 21, Pa.
- Long Island Radio Co.**, Box 474, Montrose, Pa.
- LORIS SALES**, P.O. Box 1896, Dept. 3 Sacramento, Calif.
- Lowenthal Co., T. R.**, 1205 W. Sherwin Ave., Chicago 26, Ill.
- Marino Radio Co.**, 203 Greenwich St., N. Y. 7
- MARITIME INTERNATIONAL CO.**, 11 State St., N. Y. 4
- MARITIME SWITCHBOARD**, 338 Canal St., N. Y. 13
- Mark Electronics**, Box 14, 1888 Randall Ave., N. Y. 72
- Maspeth Telephone & Radio Corp.**, 142 Ashland Pl., Brooklyn 1, N. Y.
- McGee Radio Co.**, 1422 Grand Ave., Kansas City, Mo.
- McNeal Electric & Equip. Co.**, 4736 Olive St., St. Louis 8, Mo.
- Mercury Trading Co.**, 157 E. McMicken Ave., Cin. 2, Ohio
- MERRICK ELECTRONICS CO.**, 16608 Douglas Ave., Jamaica, N. Y.
- Metropolitan Electronic & Inst. Co.**, 6 Murray St., N. Y.
- METROPOLITAN OVERSEAS SUPPLY CORP.**, 1133 Bway., N. Y. 10
- Microwave Equip. Supply Co.**, 255 E. 78 St., N. Y. 21
- MOGULL CO., INC., ALEXANDER**, 17 Warren St., N. Y. 7
- Monmouth Radio Laboratories**, 1083 Norwood Ave., Elberon, N. J.
- Munsell Co.**, Eugene, 34 Exchange Pl., Jersey City, N. J.
- Nescorp Electronics**, 2635 W. Grand Ave., Chicago 12, Ill.
- Niagara Radio Supply Corp.**, 160 Greenwich St., N. Y.
- Nibur Sales Corp.**, 62-A White St., Red Bank, N. J.
- Normandy Wire & Cable Co., Inc.**, 335 Bond St., Brooklyn, N. Y.
- Norman Electronics Corp.**, 1030 S. State St., Chicago, Ill.
- Norman Radio Distributors, Inc.**, 94-29 Merrick Blvd., Jamaica 5, N. Y.
- O'DEL ELECTRONICS CORP.**, 293 W. Broadway, N. Y. 13
- Offenback & Reimus Co.**, 1564 Market St., San Fran., Cal.
- Olympic Electronics Supply**, 7636 Santa Monica Blvd., Los Angeles 46, Calif.
- Opad Green Co.**, 71 Warren St., N. Y. 7
- Pace Electronics Corp.**, 190 Washington St., N. Y. 7
- PEAK ELECTRONICS CO.**, 66 W. Broadway, N. Y. 7
- Phillips Tube Co.**, 2281 Nostrand Ave., Bklyn 34, N. Y.
- Photocon Sales**, 417 N. Foothill Blvd., Pasadena 8, Cal.
- Platt Electronics Corp.**, 489 Broome St., N. Y. 13
- Poly Tech Co.**, 919 Dawson St., N. Y. 59
- POWELL, HAROLD H.**, 2104 Market St., Phila. 3, Pa.
- Precision Electrical Instrument Co.**, 148 Grand St., N. Y. 13
- Premier T. V. Radio Supply (Div. Continental Corp.)**, 3241 W. North Ave., Chicago 47, Ill.
- Radcom Engineering Co.**, 8 Livingston St., Newark 3, N. J.
- RADIO CENTER**, 856 Smith St., Detroit, Mich.
- RADIO DEVELOPMENT & SLS CO.**, 323 Atlantic Ave., Bklyn 1, N. Y.
- Radio Distr. Co.**, 925 E. 55th St., Chicago, Ill.
- RADIO & ELECTRONICS SURPLUS**, 13935 Brush St., Detroit 3, Mich.
- Radio Ham Shack, Inc.**, 189-191 Greenwich St., N. Y. 7
- Radiolabs Corp.**, 1612 Grand Ave., Kansas City, Mo.
- Radio Shack Corp.**, 167 Washington St., Boston, Mass.
- Radio Surplus Corp.**, 732 S. Sherman St., Chicago 5, Ill.
- Rad-Tel Tube Co.**, 115 Coit St., Irvington, N. J.
- RED ARROW ELECTRONIC SALES CO.**, 214 Stanton St., N. Y.
- RELAY SALES CO.**, 833 W. Chicago Ave., Chicago 22, Ill.
- RELIANCE MERCH. CO.**, Arch St. Cor. Crosky, Phila. 3, Pa.
- RESISCO CORP.**, 306 Broadway, N. Y.
- Role Electronics, Inc.**, 114 Liberty St., N. Y.
- ROSE ELECTRONICS, INC.**, 76 Vesey St., N. Y. 7

(Continued on page 646)



ALNICO FIELD MOTORS

(Approx. size overall . . . 3 3/4" x 1 1/4" diameter)
DELCO TYPE #5069600:
 27.5 volts DC; 250 RPM
 \$19.95

PM Motor, Delco Type #5069371; 27.5 volt;
 DC Alnico Field; 10,000 r.p.m.; dimensions
 1" x 1" x 2" long; shaft extension 1/2", diam-
 eter 0.125" \$12.50

PIONEER GYRO FLUX GATE AMPLIFIER
 Type 12076-1-A, complete with tubes
 \$27.50 ea.

AC CONTROL MOTOR

Diehl Mfg. Co., FPE-25-7, 20 Volts, 2 ph
 1600 RPM, .85 amps. \$15.00

A. C. SYNCHRONOUS MOTOR Type RBC
 2505; Volts 115; Cycles 60; RPM 60; Mfg.
 HOLTZER CABOT ELECT. Approx. size:
 2 3/8" x 2 1/2" x 2 3/8" \$15.00 ea.

400 CYCLE MOTORS

PIONEER: TYPE CK5 2 Phase; 400 cycles
 \$35.00 ea.

EASTERN AIR DEVICES TYPE J49A: 115 V;
 0.1A; 7000 r.p.m. Single phase 400
 cycle \$17.50 ea

AIRESEARCH: 115V; 400 CPS; Single
 phase 6500 RPM; 1.4 amp; Torque 4.6 in.
 oz.; HP .03 \$10.00 ea.

EASTERN AIR DEVICES TYPE JM6B:
 200 VAC; 1 amp; 3 phase; 400 cycles.
 6000 RPM \$12.50 ea.

EASTERN AIR DEVICES, TYPE J31B:
 115 V. 400-1200 Cycle. Single Phase
 \$12.50 ea.

AIRESEARCH: AC Induction, 200 V; 3
 Phase, 400 Cycle, 2 H.P.; 11,000 RPM; 8
 amps \$79.50 ea.

AIRESEARCH: AC Induction, 200 V; 3
 Phase, 400 Cycle, 12 H.P.; 6500 RPM; 1.5
 amps \$25.00

Electric Motor: PNT-1400-A1-1A Serial
 No. 207, 208 V., 400 cycles, 3 phase Kearfott
 Co., Inc. \$17.50 ea.

SERVO MOTOR 10047-2-A; 2 Phase;
 400 Cycle. with 40-1 Reduction Gear
SMALL DC MOTORS

DELCO #5068750: constant speed; 27 VDC;
 160 RPM; built-in reduction gears and
 governor \$17.50 ea.

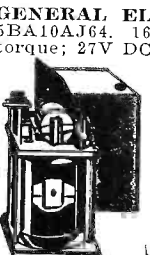
J. OSTER: series reversible motor; 1/50th
 H.P.; 10,000 RPM; 27 1/2 VDC; 2 amps;
SPERRY # 806069; approx. size 1 3/8" x 3 1/2"

(Approx. size . . . 4" long x 1 1/4" dial.)
General Electric Type 5A10AJ37; 27 volts,
 DC; 5 amps, 8 oz. inches torque; 250 RPM,
 shunt wound; 5 leads; reversible. \$15.00 ea.

General Electric, Mod. 5BA10FJ33; 12 oz.
 inches torque, 12 V DC, 56 RPM, 1.02 amp.
 \$15.00 ea.

General Electric-Type 5BA10AJ52C; 27
 volts, DC; 5 amps, 8 oz. inches torque;
 145 RPM; shunt wound; 4 leads; reversible
 \$15.00 ea.

GENERAL ELECTRIC DC MOTOR Mod.
 5BA10AJ64, 160 r.p.m.; 65 amp; 12 oz.-in.
 torque; 27V DC \$19.95 ea.



**SCHWEIN
 REMOTE CONTROL
 DUAL GYRO**

Free and rate gyro type
 45600. Contains two 28 volt
 DC constant speed gyros . . .
 one operates horizontally,
 the other vertically. Vertical
 master gyro influences hori-
 zontal gyro position, which
 in turn will actuate a series of limiting
 switches controlling any number of elec-
 trical devices. Both gyros turn in excess of
 the 30,000 rpm. Size 8" x 4 1/4" x 4 1/4". Comes
 with metal cover. \$22.50 ea.

BLOWER

Eastern Air Devices,
 Type J31B; 115 volt;
 400-1200 cycle; single
 phase; variable fre-
 quency; continuous
 duty; L & R #2
 blower; approx. 22 cu.
 ft./min. \$15.00

BLOWER ASSEMBLY

115 Volt, 400 Cycle, Westinghouse Type
 FL, 17CFM, complete with capacitor.
 New \$12.50 ea.



SENSITIVE ALTIMETERS

Pioneer Sensitive altimeters,
 0-35,000 ft. range . . . cali-
 brated in 100's of feet. Baro-
 metric setting adjustment. No
 hook-up required. . . \$12.95 ea.

INVERTERS

10563 LELAND ELECTRIC

Output: 115 VAC; 400 cycle; 3-phase;
 115 VA; 75 PF. Input: 28.5 VDC; 12
 amp. \$69.50 ea.

PE 218 LELAND ELECTRIC

Output: 115 VAC; Single Phase; PF 90;
 380/500 cycle 1500 VA. Input: 25-28 VDC;
 92 amps; 8000 RPM; Exc. Volts 27.5
BRAND NEW \$39.95 ea.

MG 153 HOLTZER-CABOT

Input: 24 V. DC, 52 amps; Output: 115
 volts—400 cycles, 3-phase, 750 VA. and 26
 Volt—400 cycle, 250 Va. Voltage and fre-
 quency regulated \$95.00 ea.

PIONEER 12130-3-B

Output: 125.5 VAC; 1.15 amps, 400 cycle
 single phase, 141 VA. Input: 20-30 VDC,
 18-12 amps. Voltage and frequency regu-
 lated \$89.50 ea.

12116-2-A PIONEER

Output: 115 VAC; 400 cyc; single phase;
 45 amp. Input: 24 VDC 5 amp. . . . \$79.50 ea.

10285 LELAND ELECTRIC

Output: 115 Volts AC, 750 V.A., 3 phase,
 400 cycle, .90 PF, and 26 volts, 50 amps,
 single phase, 400 cycle, .40 PF. Input:
 27.5 VDC, 60 amps. cont. duty, 6000 RPM.
 Voltage and Frequency regulated. \$195.00

10486 LELAND ELECTRIC

Output: 115 VAC; 400 Cycle; 3-phase; 175
 VA; .80 PF. Input: 27.5 DC; 12.5 amp; Cont.
 Duty \$90.00 ea.

PIONEER 10042-1-A

DC INPUT 14 Volts; OUTPUT 110 Volts; 400
 Cycle 1-Phase; 50 Watt. \$90.00

12133-1A PIONEER

Output: 115 VAC; 3-phase; 400 cycle; 250
 VA; 0.7 PF. Input: 24 VDC; 18 amp. Volt-
 age and freq. regulated. \$125.00

94-32270-A LELAND ELECTRIC

Output: 115 Volts; 190 VA; Single Phase;
 400 Cycle; .90 PF, and 26 Volts; 60 VA;
 400 Cycle; .40 PF. Input: 27.5 Volts Dc;
 18 amps; cont. duty, voltage and freq.
 regulated \$95.00

115 VOLT GENERATORS



Brand new Eclipse
 generators: 115 VAC;
 9.4 amp; 1000 watts;
 single phase; 800
 cycles, 2400-4200 rpm.
 DC output is 30 volts
 at 25 amp. Unit has spline drive shaft and
 is self-excited \$29.95



REVERSIBLE MOTOR
 U.S.N. No. 451-1314
 Rotational Speed 2.3 RPM.
 A lightweight unit suit-
 able for all types of rota-
 tion application. Excellent
 for rotating light beams,
 antennas or anywhere a
 low RPM high torque
 motor is needed. Output
 torque approx. 100 lbs.
 Consists of high speed series reversible
 motor. Requires 24 VDC or 24-40 VAC @ 1
 amp. Overall size 6"L x 4"W x 4 1/4" dp.
 Shipping wt. 6 lbs. USED, GOOD. . . \$11.95

TRANSFORMERS

SOLA TRANSFORMER, #30663; 1 KVA;
 210-270 Volts; 240 Sec.; 3-Phase. . . \$175.00
FILAMENT, Gen. Elec. #7455321; Primary
 110/125 Volts. Secondary 11 Volts 65 Amps.
 975 KVA. Shipping wt. approx. 60 pounds.
 \$24.95

FILAMENT, AMERTRAN #29048; Primary
 115 Volts, 50/60 cycle. Secondary 5 volts,
 190 amps. Shipping weight approx. 75 lbs.
 \$36.50

VARIABLE, AMERTRAN #29144; 250 VA,
 103-126 commutator range, fixed windings,
 115 volts, max. 2.17 amps. \$19.95

Immediate Delivery
ALL EQUIPMENT FULLY GUARANTEED
 All prices net FOB Pasadena, Calif.

**TACHOMETER INDICAT
 SINGLE**



Sensitive Type, Kollm-
 Mark V; Range 0-3500 R.
 in 3 1/2 revolutions of
 indicating pointer. \$9.95
Tachometer Indicator and Gener- Both \$3
TACHOMETER GENERATOR (MARK \$25.50



G. E. GENERATOR

General Electric Type
 ASB-81JJ3; 400 cycle
 at 115 volts; 7.2 amps;
 rpm.; size 6" long x
 dia. \$99.50

SINE-COSINE GENERATORS

(Resolvers)

Diehl Type FJE43-9 (Single Phase Rot
 Two stator windings 90° apart, prov-
 two outputs equal to the sine and cosin-
 the angular rotor displacement. Input v-
 age 115 volts, 400 cycle. \$30.00

Diehl Type FPE-43-1 same as FJE-
 except it supplies maximum stator volt-
 of 220 volts with 115 volts applied
 rotor \$25.00

Arma Resolver Type 218014; equal in
 to size 5 synchro; 55-60 cycle; single ph-
 primary, 2 phase secondary. \$78

VOLTAGE GENERATORS (RATE)

ALNICO MIDGET D.C. VOLTAGE GEN-
 ATOR Type B-35-D \$1

ALNICO MIDGET D.C. VOLTAGE GEN-
 ATOR Type B-44-D \$1

A.C. GENERATOR: 67 V., 20 Cyc., 2-Ph.
 .015 Amps, Type PM-1, 1200 R.P.M. . . \$1

**SYNCHRONOUS
 SELSYNS**



110 volt, 60 cycle,
 brass cased, approx.
 4" dia. x 6" long.
 Mfg. by Diehl and
 Bendix.

Quantities Available.
REPEATERS \$20.00
TRANSMITTERS \$20.00

SYNCHROS

IF Special Repeater (115V-400 Cycle) . . \$15.00
2JF 3 Generator (115-400 cyc.) . . \$10.00
5C Control Transformer: 90-50 Volt
Cyc. \$50.00
5F Motor (115/90 volt-60 cyc.) . . \$60.00
5G Generator (115/90 volt-60 cyc.) . . \$50.00

5/DG Differential Generator (90-90 v-
-400 cyc.) \$30.00
TRANSMITTER, BENDIX C-78248;
 Volt, 60 Cycle \$25.00
Differential-C-78249, 115 Volt; 60 Cycle
 \$25.00

REPEATER, BENDIX C-78410; 115 V
60 Cycle \$37.50
REPEATER, AC synchronous 115 V.
cycle, C-78863 \$15.00
REPEATER, DIEHL MFG. No. FJE 2
115 Volt; 400 Cycle; Secondary 90 Volt
 \$27

7G Synchro Generator (115/90 volt;
cycle) \$75
6G Synchro Generator (115/90 volt;
cycle) \$60
6DG Synchro Differential Generator (90
volt; 60 cycle) \$60
2JF51 Selsyn Control Transformer: 105
Volts, 60 Cycle \$50
2JD5J2 Selsyn Motor: 115-90 Volts; 60 cy
 \$50

5JD5HA1 Selsyn Generator: 115-105 Vol
60 cycle \$50
2JF1 GENERATOR: 115-57.5 Volt;
cycle \$12.50
2JH1 DIFFERENTIAL GENERATOR: 5
-57.5 Volt; 400 cycle. \$12.50
2JG1 CONTROL TRANSFORMER: 57.5
57.5 Volt; 400 cycle. \$7.50

PIONEER AUTOSYNS

AY-1 26 Volt—400 Cycle. . . \$6
 AY-5 26 Volt—400 Cycle. . . \$7
 AY27D \$12
 AY6—26 Volt—400 cyc. \$4.95
 AY30D—26 Volt—400 cyc. \$25.00
 AY14D \$10.00
 AY34 \$20
 AY20—26 Volt—400 cyc. \$12.50

PIONEER TORQUE UNITS

TYPE 12625-7-A: 400 Cycles, 26 Volts. \$95.
TYPE 12604-3-A: Contain CK5 Motor co-
 pled to output shaft through 125:1 gear r-
 duction train. Output shaft coupled to aut-
 syn, follow-up (AY43). Ratio of outp-
 shaft to follow-up Autosyn is 15:1. \$70.00
TYPE 12602-1-A: Same as 12606-1-A ex-
 cept it has a 30:1 ratio between output sha-
 and follow-up Autosyn. \$70.00
TYPE 12603-1-A: Same as 12606-1A ex-
 cept it has base mounting type cover
 motor and gear train. \$70.00

MICROPOSITIONER

Barber Colman AYLZ 2133-I Polarized D.
 Relay: Double Coil Differential sensiti-
 Alnico P. M. Polarized field. 24V contact
 .5 amps; 28 V. Used for remote position-
 synchronizing, control, etc. \$12.50

C and H Sales Company

BOX 356-X EAST PASADENA STATION • PASADENA 8, CALIFORNIA

**BRAND NEW SURPLUS
OFFERED BY A LEADING
SUPPLIER OF ELECTRONIC
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**INVERTERS, AUTOSYNS, PRECISION
AUTOSYNS, RATE GENERATORS, SINE-
COSINE GENERATORS, SYNCHROS,
GYROS, A. C. MOTORS, D. C. MOTORS,
ALNICO FIELD MOTORS, SERVO
MOTORS, TORQUE UNITS, TORQUE
AMPLIFIERS, FREQUENCY METERS,
AND BLOWER ASSEMBLIES.**

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The tentative Y. R. A. schedule:

1-22, New York; 28, Horseshoe Harbor;
2000, 30, Am...

Marhasset, Or... 5, Huguenot;
Or... J...

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WESTERN UNION ADDRESS:

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U. S. EXPORT LICENSE — 2140

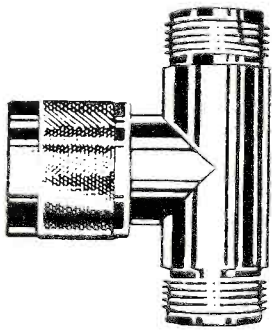
ALL PRICES F. O. B. GREAT NECK, N. Y.

**INSTRUMENT
ASSOCIATES**

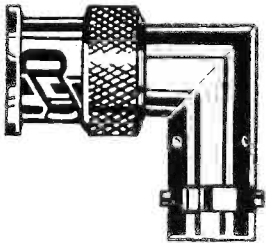
351 GREAT NECK ROAD, GREAT NECK, N. Y.

Telephone Great Neck 4-1147

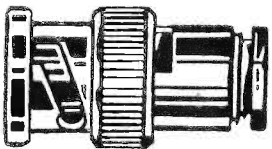
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UG 107 B/U



UG 306/U



UG 88/U

Wilgreen Industries

99 Murray Street
New York 7, N. Y.
Worth 4-2490-1-2

DISCOUNTS 40-60-80%

**8 to 48 Hour
Delivery on
'AN' & 'UG'
Connectors!**

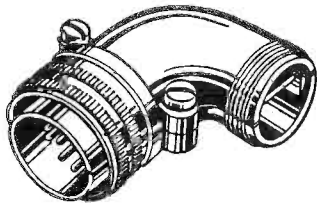
Don't wait 'til your assembly line stops before you begin searching for vital 'AN' and 'UG' connectors. Let Wilgreen Industries break the production bottleneck at your plant! Just send your requirements for any connectors, in any amount, to Wilgreen. You get immediate quotation for the quantity you want!

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| MX407/U | UG982/U | PL118 |
| MX407A/U | UG707/U | PL148A |
| 49120 | UG710/U | PL153A |
| 49121A | UG711/U | PLQ171 |
| UG941A/U | PL112 | U16/U |

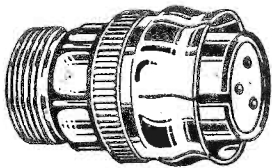
"UG" CONNECTORS "UG"

TYPE	TYPE	TYPE	TYPE	TYPE
UG9/U	UG46/U	UG115/U	UG234/U	UG348/U
UG10/U	UG49/U	UG119U/P	UG235/U	UG349/U
UG11/U	UG50/U	CW123A/U	UG236/U	UG352/U
UG12/U	UG57/U	UG131/U	UG237/U	M358
UG13/U	UG57B/U	UG146/U	SO239	M359A
UG14/U	UG58/U	UG148A/U	UG241/U	MT412
UG15/U	UG58A/U	UG149A/U	UG242/U	UG414/U
UG16/U	UG59/U	UG154/U	UG243/U	UG419/U
UG17/U	UG59A/U	CW155/U	UG244/U	UG421/U
UG18/U	UG60/U	UG155/U	UG245/U	UG422/U
UG18A/U	UG60A/U	UG156/U	UG246/U	UG423/U
UG18B/U	UG61/U	UG157/U	UG247/U	UG424/U
UG19/U	UG61A/U	UG158/U	UG249/U	UG478/U
UG19A/U	UG83/U	CW159/U	UG250/U	UG479/U
UG19B/U	UG85/U	UG159A/U	UG252/U	UG482/U
UG20/U	UG86/U	UG160A/U	UG253/U	UG483/U
UG20A/U	UG87/U	UG160B/U	UG254/U	UG484/U
UG20B/U	UG88/U	UG166/U	UG255/U	UG487/U
UG21/U	UG88B/U	UG167/U	UG256/U	UG491/U
UG21A/U	UG89/U	UG167A/U	UG257/U	UG492/U
UG21B/U	UG90/U	UG173/U	PL258	UG493/U
UG21C/U	UG91/U	UG174/U	PL259	UG494/U
UG21D/U	UG91A/U	UG175/U	PL259A	UG495/U
UG22/U	UG92/U	UG176/U	UG259/U	UG496/U
UG22A/U	UG92A/U	UG180A/U	UG260/U	UG499/U
UG22B/U	UG93/U	UG181A/U	UG260A/U	UG503/U
UG22C/U	UG93A/U	UG182A/U	UG261/U	MX504
UG23/U	UG94/U	UG185/U	UG262/U	UG505/U
UG23A/U	UG94A/U	UG188/U	UG266/U	UG506/U
UG23B/U	UG95/U	MX195/U	UG269/U	UG507/U
UG23C/U	UG95A/U	UG197/U	UG270/U	UG526/U
UG27A/U	UG96/U	UG201/U	UG271/U	UG530/U
UG27B/U	UG96A/U	UG202/U	UG272/U	UG531/U
UG28/U	UG97/U	UG203/U	UG273/U	UG532/U
UG28A/U	UG97A/U	UG204A/U	UG274/U	UG533/U
UG28B/U	UG98/U	UG206/U	PL274	UG535/U
UG29/U	UG98A/U	UG207/U	UG275/U	UG536/U
UG29A/U	UG100/U	UG208/U	UG276/U	UG541/U
UG29B/U	UG100A/U	UG212A/U	UG279/U	MX554/U
UG30/U	UG101/U	UG213A/U	UG286/U	UG557/U
UG32/U	UG101A/U	UG215/U	UG287/U	MX564/U
UG33/U	UG102/U	UG216/U	UG290/U	UG567/U
UG34/U	UG106/U	UG217/U	UG291/U	UG568/U
UG35A/U	UG107A/U	UG218/U	UG294/U	UG571/U
UG36/U	UG107B/U	UG219/U	UG299/U	UG572/U
UG37/U	UG108/U	UG220/U	UG306/U	UG573/U
UG37A/U	UG108A/U	UG222/U	UG309/U	UG625/U
UG38A/U	UG109/U	UG223/U	UG333/U	UG627/U
UG39/U	UG109A/U	UG224/U	UG334/U	UG628/U
UG40/U	UG110/U	UG231/U	UG335/U	UG634/U
UG45/U	UG114/U	UG235/U	UG347/U	MX913/U

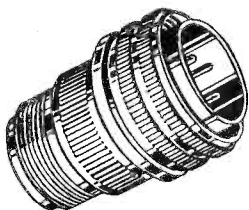
"AN" CONNECTORS "AN"



AN 3108 A/B



AN 3107 A/B



AN 3106 A/B

851P	16-9P	18-22P	20-16S	22-10S	22-37S	24-28S	32-3S	36-8P	40-12P
851S	16-9S	18-22S	20-17P	22-11P	21-1P	24-835P	32-4P	36-8S	40-12S
10S-2P	16-10P	18-23P	20-17S	22-11S	24-1S	24-835S	32-5P	36-9P	40-13P
10S-2S	16-10S	18-23S	20-18P	22-12P	24-2P	28-1P	32-5S	36-9S	40-13S
10SL-3P	16-11P	18-24P	20-18S	22-12S	24-2S	28-1S	32-6P	36-10P	40-14P
10SL-3S	16-11S	18-24S	20-19P	22-13P	24-3P	28-2P	32-6S	36-10S	40-14S
10SL-4P	16-12P	18-25P	20-19S	22-13S	24-3S	28-2S	32-7P	36-11A	44-1S
10SL-4S	16-12S	18-25S	20-20P	22-14P	24-4P	28-3P	32-7S	36-11B	44-2P
12S-1P	16-13P	18-26P	20-20S	22-14S	24-4S	28-3S	32-8P	36-12S	44-2S
12S-1S	16-13S	18-26S	20-21P	22-15P	24-5P	28-4P	32-8S	36-12S	44-2S
12S-2P	18-1P	18-27P	20-21S	22-15S	24-5S	28-4S	32-9P	36-13P	44-3P
12S-2S	18-1S	18-27S	20-22P	22-16P	24-6P	28-5P	32-9S	36-13S	44-3S
12S-3P	18-2P	18-28P	20-22S	22-16S	24-6S	28-5S	32-10P	36-14S	44-4P
12S-3S	18-2S	18-28S	20-23P	22-17P	24-7P	28-6P	32-10S	36-15P	44-4S
12S-4P	18-3P	18-29P	20-23S	22-17S	24-7S	28-6S	32-11P	36-15S	44-5P
12S-4S	18-3S	18-29S	20-24P	22-18P	24-7P	28-7P	32-12P	36-16P	44-5S
12S-5P	18-4P	18-30P	20-24S	22-18S	24-9S	28-7S	32-12S	36-16P	44-6P
12S-5S	18-4S	18-30S	20-25P	22-19P	24-10P	28-8P	32-13P	36-16S	44-6S
12S-6P	18-5P	18-31P	20-25S	22-19S	24-10S	28-8S	32-13S	36-17P	44-6P
12S-6S	18-5S	18-31S	20-26P	22-20P	24-11P	28-9P	32-14S	36-17S	44-7S
14S-1P	18-6P	20-1P	20-26S	22-20S	24-11S	28-9S	32-14S	36-18P	44-7P
14S-1S	18-6S	20-1S	20-27P	22-21P	24-12P	28-10P	32-15P	36-18S	44-8S
14S-2P	18-7P	20-2P	20-27S	22-21S	24-12S	28-10S	32-15S	36-19P	44-8P
14S-2S	18-7S	20-2S	20-28P	22-22P	24-14P	28-11P	32-16P	36-20P	44-9P
14-3P	18-8P	20-3P	20-28S	22-22S	24-14S	28-11S	32-16S	36-20S	44-9S
14-3S	18-8S	20-3S	20-29P	22-23P	24-15P	28-12P	32-17P	36-21P	44-9P
14S-4P	18-9P	20-4P	20-29S	22-23S	24-15S	28-12S	32-17S	36-21S	44-9S
14S-4S	18-9S	20-4S	20-30P	22-24P	24-16P	28-13P	32-18P	36-22P	44-9P
14S-5P	18-10P	20-5P	20-30S	22-24S	24-16S	28-13S	32-18S	36-853P	48-5S
14S-5S	18-10S	20-5S	20-31P	22-25P	24-17P	28-14P	32-19P	3057-3	3057-4
14S-6P	18-11P	20-6P	20-31S	22-25S	24-17S	28-14S	32-19S	3057-4	3057-5
14S-6S	18-11S	20-6S	20-32P	22-27P	24-18P	28-15P	32-20P	3057-6	3057-7
14S-7P	18-12P	20-7P	20-32S	22-27S	24-18S	28-15S	32-20S	3057-8	3057-8
14S-7S	18-12S	20-7S	20-33P	22-28P	24-19P	28-16P	32-20P	3057-9	3057-9
14S-9P	18-13P	20-8P	20-33S	22-28S	24-19S	28-16S	32-101P	3057-10	3057-10
14S-9S	18-13S	20-8S	20-33S	22-28S	24-19S	28-16S	32-101S	3057-10-5	3057-10-5
16S-1P	18-14P	20-9P	22-1P	22-29P	24-20P	28-17P	32-102P	3057-11	3057-11
16S-1S	18-14S	20-9S	22-1S	22-29S	24-20S	28-17S	32-102S	3057-12	3057-12
16-2P	18-15P	20-10P	22-2P	22-30P	24-21P	28-18P	36-1P	3057-16	3057-16
16-2S	18-15S	20-10S	22-2S	22-30S	24-21S	28-18S	36-1P	3057-20	3057-20
16S-3P	18-16P	20-11P	22-3P	22-31P	24-22P	28-19P	36-2P	3057-24	3057-24
16S-3S	18-16S	20-11S	22-3S	22-31S	24-22S	28-19S	36-2P	3057-28	3057-28
16S-4P	18-17P	20-12P	22-4P	22-32P	24-23P	28-20P	36-3P	3057-32	3057-32
16S-4S	18-17S	20-12S	22-4S	22-32S	24-23S	28-20S	36-3P	3057-40	3057-40
16S-5P	18-18P	20-13P	22-5P	22-33P	24-24P	28-21P	36-4P		
16S-5S	18-18S	20-13S	22-5S	22-33S	24-24S	28-21S	36-4P		
16S-6P	18-19P	20-14P	22-6P	22-34P	24-25P	28-22P	36-5P		
16S-6S	18-19S	20-14S	22-6S	22-34S	24-25S	28-22S	36-5S		
16-7P	18-20P	20-15P	22-7P	22-35P	24-26P	32-1P	36-6P		
16-7S	18-20S	20-15S	22-7S	22-35S	24-26S	32-1S	36-6P		
16S-8P	18-21P	20-16P	22-8P	22-36P	24-27P	32-2P	36-6P		
16S-8S	18-21S	20-16S	22-8S	22-36S	24-27S	32-2S	36-7P		
			22-9P	22-37P	24-28P	32-3P	36-7S		

Electronic's TREMENDOUS STOCK!

READY ON OUR SHELVES
FOR RUSH SHIPMENT!



JUST WHAT
WANT!

Here's a partial listing of some items we own and have in stock . . .

4.25	91P1	27.50	WL-672
9.50	10T1	.75	700-A
14.95	10Y	.99	700-D
3.40	12-4	1.25	702-A
17.50	12GP7	17.50	704-A
4.75	D-21	2.75	704-B
3.90	15E	1.20	705-A
9.00	15R	5.50	706-AY
3.95	DF-20	1.25	706-B
4.75	D-21	8.50	706-BY
12.50	RX-21	1.25	706-CY
1.85	23D4	17.50	706-EX
5.60	FC-27A	1.85	706-GY
8.95	28D7	1.00	707-A
10.25	RK-34	7.50	707-B
9.90	35-T	8.00	707-BY
3.95	35-TG	.35	708-A
1.50	38-44	.75	709-A
.89	CHS-41	1.25	713-A
.89	VR-54	2.50	715-A
29.50	55-1	100.00	715-B
14.95	RK-60/1641	100.00	717-A
2.10	QK-60	1.75	719-A
21.00	QK-61	3.25	721-A
4.65	H-65	.85	722-A/B
2.20	H-69	.95	724-A
2.25	71-A	1.20	724-B
12.50	CEQ-72	320.00	725-A
22.50	RKR-72	1.50	726-B
22.50	RKR-72/AJ63	1.50	726-C
42.50	RKR-73	9.25	728-EY
31.00	B-74	1.80	708-A
4.25	75-T	1.30	708-A
14.50	PK-81A	.99	803-A
70.00	83	1.25	807
67.50	VR-90	1.25	807
97.50	VR-91	17.50	808
147.50	VR-92	11.50	809
63.00	C-100-E	12.50	810
63.00	100-TH	37.50	811
68.00	HF-100	3.25	812
33.50	VR-105	1.25	814
80.00	UU-111	2.50	815
57.50	X-111	675.00	816
30.00	111-A	2.50	817
299.00	111-H	2.50	818
310.00	HY-114B	1.80	826
190.00	C-120	12.50	SD-828A
125.00	VR-150	3.75	828
2.95	211-JAN	1.50	829-B
5.55	212-E	42.50	830-B
6.25	RK-215	9.25	832-A
6.25	227	4.90	833-A
5.90	RX-233A	3.75	833-A
4.90	233-A	6.25	836
6.50	248-A	1.10	838
9.90	249-C	9.25	838
1.75	250-R	19.25	841
32.50	250-TH	22.50	843
2.50	257-B/E27	15.75	843
5.50	267-B	7.50	851
5.00	271-A	8.25	860
6.25	274-B	12.50	CG-861
7.50	300-B	13.75	864-A
11.90	304-TH	14.00	865
4.85	304-TL	6.10	866/866A
4.50	310-A	7.50	872-A
22.50	311-A	3.50	874
4.50	313-C	1.75	CRC-876
99.50	316	2.50	884
17.50	316-A	6.25	885
6.25	327-A	45.00	886
8.50	332-A	7.50	902
27.50	350-A	8.00	902-P1
26.50	350-B	22.50	SD-917
17.50	355-A	7.90	919
250.00	CK359-A	8.25	921
250.00	368-AS	1.25	925
250.00	371-B	4.25	927
310.00	378-A	13.50	930
6.00	393-A	6.00	931-A
11.50	394-A	17.50	934
5.90	FB-400	22.50	954
5.90	417-A	2.00	955
22.50	GL-434A	2.90	956
4.90	446	4.50	957
5.75	446-B	15.00	958-A
47.50	464	17.50	959
32.50	GL-471A	12.50	966-A
47.50	CK-501-LX	1.50	991
32.50	GL-502	1.85	CK-1006
47.50	527	15.00	CK-1089
47.50	532-A	3.95	CK-1090
14.50	559	3.10	R-1130
49.00	GL-562	92.50	R-1130B
57.50	575-A	6.25	1K-1089
7.60	HY-615	.60	1203-A
8.50	616	35.00	1603
19.50	651	11.50	1612
8.50	651	75.00	1613
.98	ZP-653	225.00	1616

25.00	1619	.49	CK-5672	3.50
37.50	1624	5.90	6005	3.65
37.50	1624	3.40	7193	15.95
3.10	1625	.49	8000	1.65
5.75	1626	.49	8005	2.90
1.25	1627	.51	8011	1.65
1.95	1630	2.59	8012	2.90
57.50	1631	.99	8013	2.75
57.50	1632	1.00	8013-A	5.90
57.50	1633	.75	8014A	54.00
57.50	1634	3.05	8020	1.50
57.50	1636	.49	8025	5.25
57.50	1638	2.75	9002	1.20
9.90	2050	3.50	9005	1.75
17.50	1655	12.00	9004	3.75
45.00	1656	4.50	9005	.48
4.75	1960	1.70	9006	.49
4.75	2051	14.00	38022	.89
1.25	2051	2.65	38222/3B23	4.90
12.50	5558	5.95	CK-38233	7.75
5.90	5582	12.00	D-79512	7.50
8.25	CK-5608	3.30		
1.10	5640-A			
27.50	5651			

HIGH VOLTAGE CAPACITORS

MFD	VDC	TYPE*	PRICE
.00365	15 K	14F162	\$22.50
.0091	15 K	14F222	27.50
.025	10 K	25020	29.50
.035	400 K	Y-3605	9.90
.045	16 K	P6756	1.25
.175	16 K	D-4495	10.25
.1	7.5 K	575175	19.75
.12	12 K	26F628	10.25
.15	15 K	14F63	9.75
.15	7.5 K	8K020	7.25
.15	65 K	14F72	92.50
.15/15	5K/8K	Vitamin "Q"	37.50
.25	20 K	26F359	27.50
.25	25 K	TK 200002-Z	42.50
.25	25 K	D-91281	57.50
.25	50 K	14F97	72.50
.35	8.5 K	26F267	22.50
.49	10 K	LD	42.50
.5	25 K	14F103	62.50
.5/5	10 K	PC 2151	35.50
.51	8 K	Y-3605	42.50
.75	7.5 K	26F213	22.50
1.0	10 K	14F267	42.50
1.1	13 K	25F313	45.00
1.1	14 K	14F63	47.50
1.25/1.25	7.5 K	TJ	82.50
2	32 K	53	31.00
		46	27.50
		43861-Z30	210.00

PULSE TRANSFORMERS:

UTAH:	9286	9340
9281	9287	9350
9282	9287-D	X 124 T2
9283	9288	X 124 T3
9284	9289	X 143 T3
9285	9318	X 146 T1

RAYTHEON:	UX 7307	UX 8092
UX 7350	UX 10666	UX 12920
UX 7361 A		

WESTINGHOUSE:	132 AW	145 EW2
IP1	132 BW <td>145 EW1</td>	145 EW1
IP2	132 BW2 <td>166 AW</td>	166 AW
IP3	132 DW <td>176 AW</td>	176 AW
IP4	133 AW <td>407 CW2</td>	407 CW2
IP26	134 EW	
IP29	145 EW	

GENERAL ELECTRIC:	80G13	K 2449
68G627	80G58 <td>K 2460</td>	K 2460
68G666	80G59 <td>K 2478</td>	K 2478
68G709	80G625 <td>K 2721 A</td>	K 2721 A
68G813		K 2728
68G894		K 2746 A
68G979		

PULSE NETWORKS

6-A5-1/2-2000-50P	15-E3-1/2-400-50P
9-E3-25-2000-50P	15-E4-1-800-50P
9-E3-5-2000-50P	15-E4-1-400-50P
9-E5-2-1000-50P	15-E3-5-2000-50P
10-E3-1-5-2000-50P	15-A-1-800-50P
10-E5-1-400-50P	25-E5-4-120-50P

SYNCHROS

1-CT	2J1H
1-F	2J1M1
1-G	2J5F1
1-SF	2J5H1
5-B	2J5LA1
5-CT	2J5R1
5-D	C 44958-6
5-DG	C 56701
5-F	C 69405-2
5-G	C 69406
5-SDG	C 69406-1
6-G	C 78248
6-DG	C 78249
7-G	C 78386
2J1E1	C 78472
2J1F1	C 81359
2J1G1	

MICA CONDENSERS TYPE G

MFD	KV	PRICE
.000375	10	\$2.50
.00068	10	28.50
.00057	10	28.50
.00025	10	28.50
.00015	10	28.50
.00002	10	25.50
.0008	10	28.50
.0005	10	28.50
.0002	10	28.50
.001	10	28.50
.02	10	87.50
.025	12	87.50
.00532	15	60.40
.00002	15	49.50
.002	15	52.90
.0025	15	92.50
.01	15	92.50
.00035	20	52.40
.00025	20	52.40
.00015	20	59.50
.0066	20	54.70
.0005	20	54.70
.0002	20	54.70
.0001	20	49.90
.004	20	99.50
.0025	25	100.00
.002	30	210.00
.0005	35	210.00
.001	35	225.00
.001	75	360.00

TYPE F

MFD	VDC	PRICE
.00055	5000	6.90
.00051	5000	6.90
.0009	3000	5.10
.0001	3000	6.25
.056	1000	3.90
.025	2500	5.10
.02	2000	4.90

TYPE 9

MFD	VDC	PRICE
.0005	1200	.69
.024	1500	2.50
.005	2500	1.50
.003	2000	1.90
.01	2500	2.05

VACUUM CONDENSERS

MFD	VDC	Type	Price
50MMFD	5K	8047	5.50
12MMFD	20K	VC-12	7.50
50MMFD	20K	VC-50	12.50
50MMFD	20K	W-50	11.50
100MMFD	7.5K	1133	14.50

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- All items fully GUARANTEED. All items MAKE GOOD—or we do. But you'll have NO REPLACEMENT TROUBLES when you buy ELECTRONICS, INC.
- The items we show here are but a small fractional part of our stock, which consists mostly of
- Condensers (all types). Transformers (surplus, made for military equipment). Resistors. Potentiometers. Sel-syns. Pulse Transformers and Networks.
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1/4"—5/16"
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4000 pounds
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50¢ per pound

**60,000
Used Headsets
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1.00 each
HS 18—HS 30—HS 38**

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3 B 29	"	6.0
3 E 29	"	6.0
100 TS	"	2.5
1642	"	1.1
10 Y (VT25)	"	1.1
1B32/532A	"	5.5
3 CP 1	"	3.3
211 Spec	"	3.3
10 Spec	"	2.2
5 BP 1	"	3.5
3 CP 1	"	6.0

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PLQ 169	1.00
PLQ 171	1.00
PLQ 172	1.00
PL 172	1.00

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FT. 241 Holders
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\$.10 each

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Dehydrator Cyl. 30 lbs. pressure,
Gauge and Hose
Brand New \$7.50
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mtg taken out of new equipment.
115V 60 cy 3450 RPM \$2.50 ea.
50V 50 cy 2850 RPM

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3108

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ARC-3 " " "
ART-13 " " "
T47/ART-13 " " "
BC-348 and " "

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PE-94 also PE-98
DM-40-41-42-43

**Connectors Clamps
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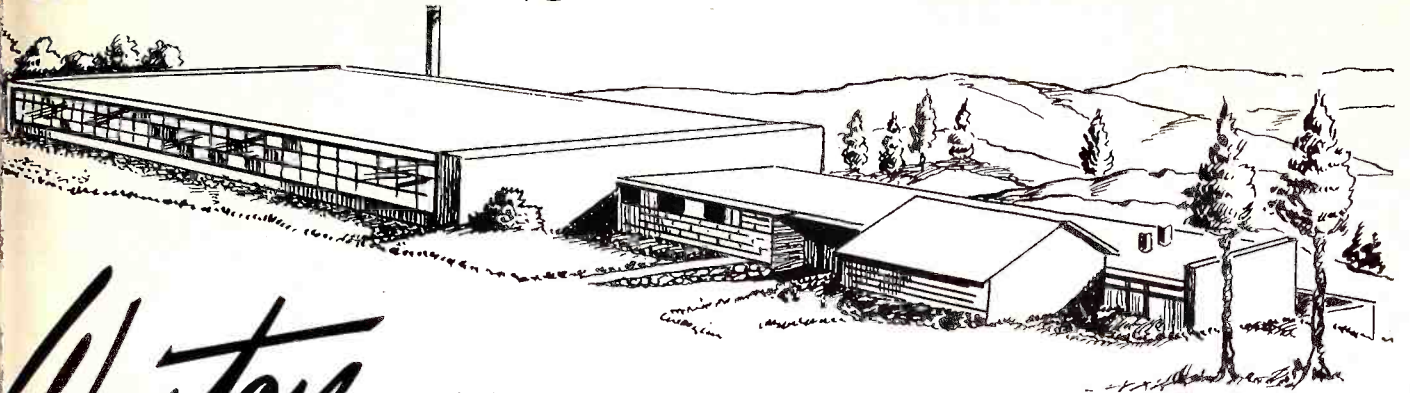
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Switchboards—Field Tele-
phones—Test Sets—Coils—
Switches—Protectors
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type materials.
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AN-APA-10	I-95A	IF-12/C	TS-33/AP	TS-138	TS-263
AN-APR-1	I-96A	IS-185	TS-34/AP	TS-142APG	TS-268B*
AN-APR-4	I-97A	IS-189	TS-35/AP	TS-143/CPM-1	TS-270A
AN-TSM-4	I-98A	LAD	TS-36/AP	TS-144/TRC-6	TS-281/TRC-7
AN-UPM-13	I-106A	LAE-2	TS-39/TSM	TS-146	TS-285/GP
AS-23	I-114	LAF	TS-45/APM-3	TS-147/AP*	TS-293
AT-67	I-115	LM	TS-46/AP	TS-148/UP*	TS-297*
AT-68	I-117	LU-2	TS-47/APR	TS-153	TS-301/U
AT-39	I-122	LU-3	TS-51/APG-4	TS-155	TS-303/AG
AT-48	I-126	LZ	TS-55/AP	TS-159-TPK	TS-311/FSM-1
BE-67	I-130A	ME-6/U	TS-56/AP	TS-164/AR	TS-323
BC-921	I-134B	OA	TS-59	TS-170/ARN-5	TS-324/U
BC-376	I-135	OAA-2	TS-60/U	TS-173/UR	TS-338
BC-438	I-137A	OAM	TS-61/AP	TS-174/U	TS-359A/U
BC-439	I-139A	OAW	TS-62/AP	TS-175/U*	TS363/U
BC-638	I-140A	P4	TS-63/AP	TS-182/UP	TS-375
BC-639	I-145	P4E	TS-65A/FM2-1	TS-184/AP	TS-377/U
BC-906D	I-147	SG-8/U*	TS-69A	TS-189/U	TS-389/U
BC-918B	I-153A	TAA-16WL	TS-76-APM-3	TS-192/CPM-4	TS-418
BC-923A	I-157A	TS-1ARR	TS-78/U	TS-194/CPM-4	TS-419
BC-936A	I-167	TS-3A/AP	TS-87/AP	TS-195/CPM-4	TS-421/U
BC-949/A	I-168	TS-8A/U	TS-89/AP*	TS-197/CPM-4	TS-433/U
BC-959-TU	I-177	TS-10A/APN-1	TS-90*	TS-198/CPM-4	TS-465/U
BC-1060A	I-178	TS-11/AP*	TS-92/AP	TS-203/AP	TS-480/U
BC-1066A	I-186	TS-12/AP*	TS-96/TPS-1	TS-204/AP	TS-505
BC-1201A	I-196A	TS-13/AP*	TS-98/AP	TS-205/AP	TS-589/U
BC-1203	I-198A	TS-14/AP	TS-100/AP	TS-207	TS-615/U
BC-1236/A	I-203A	TS-15B/AP	TS-101/AP	TS-210/MPM	TS-616/U
BC-1255/A	I-208	TS-16/APN	TS-102/AP*	TS-218/UP	TS-617/U
BC-1277	I-212	TS-18	TS-108/AP*	TS-220/TSM	TS-620/U
BC-1287A	I-222/A	TS-19	TS-110/AP	TS-226A	TSX-4SE
I-48B	I-223/A	TS-23/AP	TS-111/CP	TS-230B	TSS-4SE
I-49	I-225	TS-24/APM-3	TS-117/GP*	TS-232/TPN-2	TVN-8SE
I-56	I-233	TS-24/ARR-2	TS-118/AP	TS-239/B	TUN-8HU
I-61B	I-245	TS-26/TSM-1*	TS-125/AP*	TS-250/APN	TTX-10RH
I-83A	IE-21A	TS-27/TSM	TS-127	TS-251	
I-86A	IE-36	TS-32A/TRC-1	TS-131/AP	TS-257/AWR	

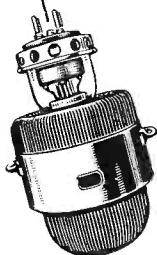
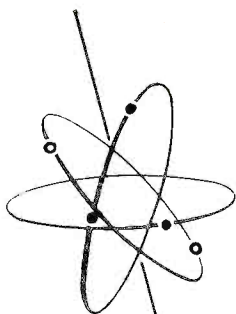
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DYNAMOTORS

DM-18	3H1618 In 13v @ 3.2a; Out 220v @ .100ma	L	6 1/4" x 3 3/4" diam.
DM-20-A	3H1620A In 14v @ 3.2a; Out 230v @ .100a	L	6 1/4" x 3 3/4" diam.
DM-21-S	3H1621S In 14v @ 3.3a; Out 250v @ .90ma	L	5 1/8" l. x 5 1/2" w. x 3 3/8" h., w/filter
DM-21-CX	3H1621CX In 24v @ 1.6a; Out 235v @ .90ma	L	5 1/8" l. x 5 1/2" w. x 3 3/8" h., w/filter
DM-24	3H1624 In 13.8v @ 2.46a; Out 220v @ 0.07a	L	4 7/8" h. x 3 3/4" w. x 5 1/2", less filter
DM-28	3H1628 In 27.9v @ 1.23a; Out 220v @ 0.070a	H	6 1/4" l. x 3 3/4" w. x 4 3/4", w/filter
DM-30-A	3H1630A In 28v @ 1.6a; Out 230v @ 0.06a	L	6 1/4" x 3 3/4" diam.
DM-32-A	3H1632A In 28v @ 1.1a; Out 250v @ 0.06a	T	5" l. x 2 3/4" w. x 3 1/5" h.
DM-32-AZ	3H1632AZ In 14v @ 2.2a; Out 250v @ 0.06a	T	5" l. x 2 3/4" w. x 3 1/5" h.
DM-33-A	3H1633A In 28v @ 5.0a; Out 575v @ 0.16a	N	7 1/4" l. x 3 1/8" w. x 3 3/4" h.
DM-53-A	3H1653A In 28.5v @ 1.3a; Out 220v @ .080a	T	5" l. x 2 3/4" w. x 3 1/5" h.
DM-53-AZ	3H1653AZ In 14.2v @ 2.6a; Out 220v @ .080a	T	5" l. x 2 3/4" w. x 3 1/5" h.
DY-1	3H1535-1 In 14v @ 2.2a; Out 250v @ 60ma	T	5" l. x 2 3/4" w. x 3 1/5" h.
DY-2	3H1535-2 In 28v @ 1.1a; Out 250v @ 60ma	T	5" l. x 2 3/4" w. x 3 1/5" h.
DY-8	3H1535-8 In 28v @ 5a; Out 565 @ 160ma	N	7 1/4" l. x 3 1/8" w. x 3 3/4" h.
DY-9	3H1535-9 In 26v @ 7.5a; Out 310v @ 355ma	F	w/base 8 1/2" x 3 1/8" x 3 1/2"
DY-9B	3H1535-9B In 28v @ 7.8a; Out 310v @ 355ma	J	w/base 8 1/2" x 3 1/8" x 3 1/2"
DY-10	3H1535-10 In 13/26v @ 15/7.5a; Out 310v @ 355ma	F	8 1/2" l. x 3 3/4" w. x 3 3/2" h.
DY-11	3H1535-11 In 28v @ 32a; Out 400v @ 0.75a; 750v @ 0.35a	E	base 3 1/4" x 6 7/8" x 1 1/8", w/filter
DY-12	3H1535-12 In 27v @ 32a; Out 400v @ 0.750a; 750v @ 0.350a	E	base 3 1/4" x 6 7/8" x 1 1/8", w/filter
DY-17	3H1535-17 In 28v @ 32a; Out 400v @ 0.75a; 750v @ 0.35a	E	base 3 1/4" x 6 7/8" x 1 1/8", w/filter
DY-20	3H1535-20 In 14v @ 6a; Out 28v @ 2a	B	3" x 4 3/4" x 5" w/filter
DY-21	3H1535-21 In 28v @ 8a; Out 400v @ 325ma	N	7 1/2" x 3 3/4" x 3 1/2"
DY-22	3H1535-22 In 28v @ 2a; Out 200v @ 125ma	N	7 1/4" x 3 3/4" x 3 1/2"
PE-73	3H1873 In 28v @ 20a; Out 1000v @ 0.35a	G	11" x 11" x 7 1/2" w/filter
PE-86	3H1886 In 28v @ 1.25a; Out 250v @ 60ma	B	5 3/8" l. x 3 1/8" w. x 5" h., w/filter
PE-94	3H1894 In 28v @ 13a; Out 13v @ 3.9a; 150v @ 0.010a; 300v @ 0.260a	P	12 3/4" x 8 7/8" x 6 1/4", w/filter
PE-98	3H1898 In 12v @ 26a; Out 13v @ 3.9a; 150v @ 0.010a; 300v @ 0.260a	P	12 3/4" x 8 7/8" x 6 1/4", w/filter
BD-77	3H1777 In 14v @ 40a; Out 1000v @ 0.35a	G	11" x 11" x 7 1/2" w/filter
BD-83	3H1783 In 14v @ 5.8a; Out 350v @ 0.13a	D	7 3/8" x 4 3/8" x 7 1/4", w/filter
BD-87	3H1787 In 14v @ 5.8a; Out 350v @ 0.13a	D	7 3/8" x 4 3/8" x 7 1/4", w/filter
BD-93	3H1793 In 28v @ 11.6a; Out 350v @ 0.13a	D	7 3/8" x 4 3/8" x 7 1/4", w/filter
EICOR	In 24v @ 5.7a; Out 420v @ .200a	R	7 3/8" x 4"
GE	In 27v @ 1.75a; Out 285v @ 0.75a	L	5 1/8" x 2 3/4"
GE	In 27v @ 1.5a; Out 285v @ .060a	L	2 3/4" x 4 1/2"
EICOR	5.7v @ 22a; Out 450v @ 150ma	R	6 3/4" x 4 1/8"

BENDIX TYPE DYNAMOTORS

DA-1A	In 28v @ 1.6a; Out 230v @ .100a	L	6 1/4" x 3 3/4" diam.
DA-1B	In 14v @ 3.2a; Out 230v @ .100a	L	6 1/4" x 3 3/4" diam.
DA-1F	In 26v @ 14.8a; Out 540v @ .450a	M	7" x 4 1/2" diam.
DA-1J	In 28v @ 1.6a; Out 230v @ .100a	L	6 1/4" x 3 3/4" diam.
DA-3A	In 28v @ 13a; Out 13v @ 3.9a; 150v @ 0.10a; 300v @ 0.260a	@ C	12" x 5" diam.
DA-6A	In 14v @ 3.2a; Out 230v @ .100a	L	6 1/4" x 3 3/4" diam.
DA-7A	In 28v @ 40a; Out 1100v @ 400a	C	11" x 5" diam.
DA-9A	In 28v @ 1.6a; Out 230v @ .100a	L	6 1/4" x 3 3/4" diam.
DA-12A	In 12.5/25v @ 29/14.4a; Out 540v @ .450a	L	7" x 4 1/2" diam.
DA-16A	In 26v @ 14.8a; Out 540v @ .450a	M	7" x 4 1/2" diam.
MP-5-B	In 14v @ 13.2a; Out 230v @ .100a	M	7 3/8" x 7 1/2" x 4 3/8"
MP-5-E	In 28v @ 1.6a; Out 230v @ .100a	D	7 3/8" x 7 1/2" x 4 3/8"
MP-8-A	In 14v @ 75a; Out 1100v @ .400a	U	7 1/2" x 10" x 15" w/filter base
MP-8-B	In 28v @ 40a; Out 1100v @ .400a	U	7 1/2" x 10" x 15" w/filter base
MP-10E-12	Xmitter In 14v @ 75a; Out 1100v @ .400a	K	14 1/4" x 12" x 9 3/4", w/filter
MP-10G-24	Rec. In 14v @ 6.0a; Out 230v @ .100a	K	14 1/4" x 12" x 9 3/4", w/filter
MP-12-A	Xmitter in 28v @ 40a; Out 1100v @ .400a	K	14 1/4" x 12" x 9 3/4", w/filter
MP-12-B	Rec. In 28v @ 3.0a; Out 230v @ .100a	B	6 1/4" x 3 3/4" diam. w/filter
MP-37-A	In 14v @ 3.2a; Out 230v @ .100a	B	6 1/4" x 3 3/4" diam. w/filter
MP-37-D	In 28v @ 1.6a; Out 250v @ 0.06a	T	5" l. x 2 3/4" w. x 3 1/5" h.
MP-42-A	In 11 to 15v @ 2.2a; Out 250v @ 60ma	T	5" l. x 2 3/4" w. x 3 1/5" h.
MP-42-B	In 28.5v @ 1.3a; Out 220v @ .080a	T	5" l. x 2 3/4" w. x 3 1/5" h.
DMDFX-168	In 14.2v @ 2.6a; Out 220v @ .080a	T	5" l. x 2 3/4" w. x 3 1/5" h.
MG-149-F	In 28v @ 18a; Out 380v @ .400a; 1000v @ .150a	C	10" x 5" diam.
MG-149-H	In 27.5v DC; Out 26v 400~ @ 250va 40% PF & 115v 400~ @ 500va 90% PF 1φ	S	12" x 8 1/2" x 7 1/2", w/filter
PE-89	In 27.5v DC; Out 26v 400~ 250va & 115v 400~ 500va 100% PF φ	S	12" x 8 1/2" x 8 1/2", w/filter
PE-109	3H2575-89 In 24v @ 14.7a; Out 115v 400~ 175va 90% PF 1φ	G	8 7/8" l. x 4 7/8" w. x 8 3/8" h., w/filter
PE-206	3H2575-109 In 12v @ 27 1/2a DC; Out 115v 400~ @ 175va 90% PF 1φ	G	8 7/8" l. x 4 7/8" w. x 8 3/8" h., w/filter
PE-218	3H2575-206 In 28v DC; Out 80v 800~ @ 500va 90% PF 1φ	G	10 1/2" x 5 3/4" x 11 1/2", w/filter
PU-7/AP	3H2575-218 In 28v @ 92a; Out 115v 400~ @ 1500va 90% PF 1φ	G	10 1/2" x 5 3/4" x 11 1/2", w/filter
PU-16/AP	3H3370-7 In 28v DC; Out 115v 400~ @ 2500va 90% PF 1φ	G	19" x 9" x 11" w/filter
WINCO	3H2574-16 In 24v DC; Out 115v 400~ @ 750va 1φ	W	15 1/2" x 7 1/2" x 10", w/filter
WINCO	In 13v DC @ 4.2a; Out 45v 400~ @ 0.420a 1φ	T	5" x 2 3/8" diam.
WINCO	In 26v DC @ 2.1a; Out 45v 400~ @ 0.420a 1φ	T	5" x 2 3/8" diam.

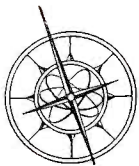
BRUSHES FOR AT ONCE DELIVERY ON ABOVE DYNAMOTORS

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A Division of COMPASS ELECTRONICS CORP.

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A WELL-INTEGRATED ORGANIZATION WITH FACILITIES AND TRAINED PERSONNEL FOR—

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COMPASS HAS ONE OF THE LARGEST AND MOST DIVERSIFIED STOCKS OF GOVERNMENT SURPLUS EQUIPMENT—IN ITS OWN WAREHOUSES

MARINE, GROUND AND AIRBORNE—RADIO, RADAR AND SONAR

RECEIVERS

- ARB
- AR-88
- CR-91
- SLR
- RAK
- RAL
- RAO
- RBO
- RBG
- RBL
- RBA
- RBM
- BC-224
- BC-312
- BC-314
- BC-344
- BC-348

AIRBORNE RADAR

- APS-2
- APS-3
- APS-4
- APS-6
- APS-10
- APS-13
- APS-15
- SCR-717
- SCR-720

FIELD TRANSMITTERS

- SCR-284**—The famous mobile and ground equipment station for field use, complete with all accessories. Range 3.8—5.8 mcs; 20 watts cw, 5 watts phone.
- SCR-510**—Mobile, portable FM radio station. Operates from 6, 12, or 24 volt dc supply. Frequency range: 20.0 to 27.9 mcs.
- SCR-610**—Same as SCR-510, but with built-in speaker and range of 27.0-38.9 mcs.
- SCR-528**—Mobile FM radio station, operates from 12 or 24 volt dc. Frequency range: 20.0-27.9 mcs.
- SCR-628**—Same as SCR-528, but with range: 27.0 to 38.9 mcs.
- BC-325**—400 watts c.w., 100 watts new or voice operates from 110 or 220 volts ac. Freq. range: 1.5-18.0 mcs. Master oscillator or crystal control.

14C—400 watts phone or 800 watts c.w. Operates from 220 volts ac. Freq. range: 2.0-18.1 mcs. Has automatic dial selection of anyone of ten preset channels. Mfr. Western Electric.

ROTATING MACHINERY

Thousands of convertors, inverters, dynamotors, and motor-generator sets in stock.

MARINE TRANSMITTERS

- TCS**—Collins mfd. Navy radiotelephones for shipboard and mobile use, complete with all accessories for operation from 12, 24, 110, 230 volts d.c. and 110 or 220 volts a.c.
- TDE**—Navy or commercial marine transmitters, complete 110 & 220 volts d.c. and a.c.
- TBK**—Navy high frequency transmitter, 2-20 mcs; 500 watts output. Supplied complete with m/g and starter for d.c. or a.c. operation.
- TBM**—same transmitter but with speech input equipment to give 350 watts phone.
- TBL**—Navy all-wave transmitter; 350 watts output: CW and phone. Supplied complete with m/g and starter for d.c. or a.c. operation.
- TAJ**—Navy intermediate freq. transmitter, 175-550 kcs; 500 watts output. Supplied complete with m/g and starter for a.c. or d.c. operation.
- TBN**—200-3,000 kcs, complete with 220/440 volt, 3 ph. 50-60c power supply—conservatively rated at 1 kw. output.

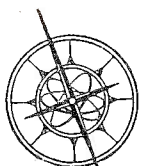
RADAR BEACONS

- AN/CPN 3 cm.
- AN/CPN-8 10 cm.
- YJ and YG for shipboard use
- AN/CPN-6 3 cm.
- AN/CPN-8 10 cm.

SA, SF, SG, SD, SJ, SK, SN, SQ—both equipment and spare parts

TEST SETS

- TS-3A/AP
- TS-10A and B
- TS-12/AP
- TS-13/AP
- TS-16/AP
- TS-35/AP
- TS-36/AP
- TS-62/AP
- TS-69A
- TS-74/UPM
- TS-89/AP
- TS-100/AP
- TS-101/AP
- TS-125/AP
- TS-173/UR
- TS-278
- TS-323
- OAA
- OAP
- OBU
- LAE
- LM
- LU
- IE-19
- I-46
- I-56
- I-208
- I-222
- SCR-211
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★ We are going out of the electronics part business, and are liquidating our entire inventory. All items offered can be inspected at our warehouse.

We will accept all reasonable offers on the plugs and connectors, as well as other items not priced.

PLUGS AND CONNECTORS

98% Amphenol—All new.

Quantity	Quantity	Quantity
PL-54 111	PL-167 747	AN 3108-18S-1S 1448
PL-55 355	PL-172 3987	AN 3108-32-10S 988
PL-56 87	PL-182 345	AN UG 22/U 280
PL-59 289	PL-Q230 685	AN UG 250 807
PL-Q61 1930	9488 114	AN 49268-50/U 86
PL-P61 602	AN 3100-12S-3S 471	AN M-359A 128
PL-Q62 628	AN 3102-14S-5S 990	AN SO-86 156
PL-P63 241	AN 3106-18-22S 375	AN SO-76 28
PL-P64 137	AN 3106-22-4S 614	AN SO-44 194
PL-Q103 67	AN 3106-24-19P 213	AN SK-19-21 3/4" B Cannon 199
PL-147A 1980	AN 3108-12S-3P 529	Assorted Clamps 517
PL-153A 269	AN 3108-14S-7S 1140	Male chassis connector to PL-148 229
PL-154A 27300	AN 3108-22-4S 5596	
PL-156A 89	AN 3108-28-19P 108	
PL-P164 32	AN 3108-20-27S 2688	
	AN 3108-18-1S 955	

MISCELLANEOUS

	Quantity	Unit Price
Antenna Loading Unit, MC-432—New	1871	.65
Battery Tester, Babson, 6 Volt—New	295	.12
BC-442 AM—New without condensers	159	1.15
Condensers, Bathtub, 1 MFD, 600V D.C.—New	300	.20
Condensers, Bathtub 1 OMFD 200V. D.C.—Used	457	.10
Crank, GC-18A—New	7	.10
Crystals, Set of, CS-137—New	2	10.00
Dynamotor Brushes—New	20916	.03
Headphone Cushions—Used per pair	152	.25
Headset, HS-30-E	2	1.00
Headset, HS-30-B—Used	12	1.00
Headset, HS-33—Used	56	1.00
HS-18	15	1.00
Indicator Box, BC-727, w/2 Jewels—New	215	.15
Inverter, PE-206, Used—Good cond.	50	6.00
Inverter, PE-218, Used—Good cond.	75	10.00
Knob Assembly, BC-312 M—New	786	.10
Landing Equipment, ZA, complete—New	14	15.00
Lip Mike, T-45—New	329	.50
MC-125A—New	184	.25
Motors, 6V— auto fan type Used—Good cond.	231	.50
MS-51	105	
Mount, MT-77/ARC5—New	9	5.00
Phono Switch and plate, S.P.D.T. New	3748	.08
Pilot Light assembly and Jewel—New	1201	.20
Relay—Leach—24V. { S.P.S.T. } —New	150	1.00
Relay, Master Electric 12V & 24V	2000	
Safety Switch, Cutler Hammer—New	23	1.00
Shock Mounts, Assorted—New (per Lb)	54	.10
Speakers, 6" PM—New	103	1.50
Surge Protector 125V DC—New	50	.10
SW-103	88	
Switch, 6 Pole 3 Position Mallory New	2891	.23
Switch, 2 Position—New	317	.20
Switches and Pots, Assorted—Used	1236	.05
Telephone—Model A Field type—Used	6	5.00
Toggle Switch S.P.D.T. Luminous Bat Handle, New. Transformer—Filament PR 1.100V Sec. (#1 winding 10.2V @ 5 A.C.T. #2 winding 10.2V @ 10 A.C.T. #3 Secondary winding can be connected in series to supply 25V with a line voltage of 115V. 60 CYC.—New	1000	.16
Tuning Units, TU-9B—Used	250	2.49
Wire, No. 39 Gauge, Single conductor enameled cotton covered reels of 750—New	18	5.00/M

● IMMEDIATE SHIPMENT ON ALL ITEMS. OFFERINGS ARE SUBJECT TO PRIOR SALE!

RECEIVERS AND TRANSMITTERS

	Quantity	Unit Price
BC-433G — COMPASS Receiver, Used, Good condition	57	14.50
BC-1206A — BEACON Receiver, Used, Good cond.— A few new	37	3.50
BC-1206C — BEACON Receiver, Used, Good cond.— A few new	7	3.50
BC-1066A — New Receiver	8	2.50
BC-733-B — Used—Some without tubes, other parts intact	15	12.00
BC-457-A—Used—Good cond.	71	7.00
BC-456-B — Modulator for Command Sets, Used	15	1.75
Selsyn Position Transmitter—G.E. 24V Model 8TJ9PDN—New	15	8.00

CONTROL BOXES

BC-606 D New	260	1.75
BC-450 A New	87	1.75
BC-958 A Used	164	.15
RM-29B Used—Remote Control and Field Telephone—as is	120	3.50
BC-965-A Selector switch—Used	71	.10

TUBES

1625 Transmitting, New	4000	.12
3D6 New	29	.30

● STRIP, 302 S.S., 038 Gauge 4 1/2" x 13" and 4 1/2" x 18" Quantity . . . 4500 lbs.
● TINPLATE, Misprint, Various gauges, Quantity . . . 100 net tons

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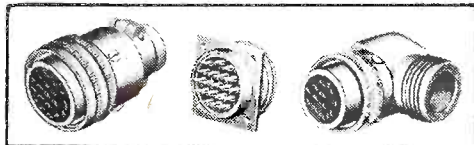


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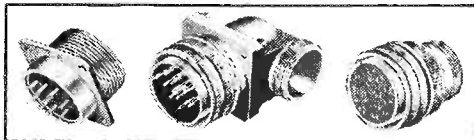
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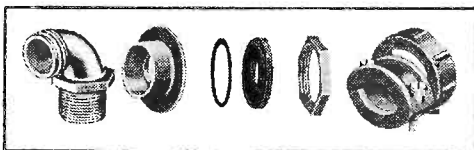
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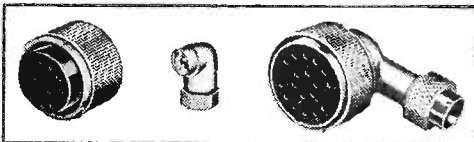
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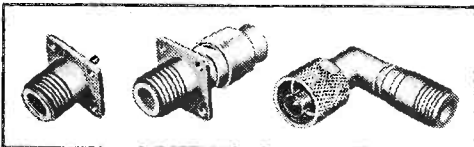
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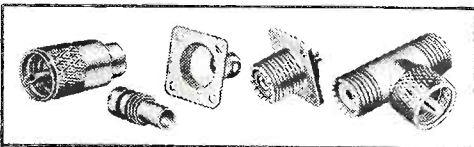
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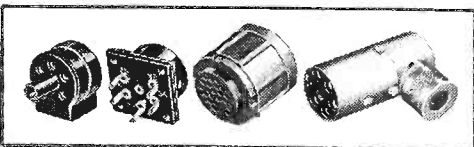
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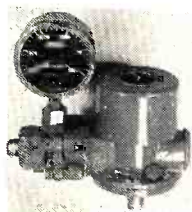
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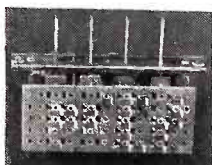


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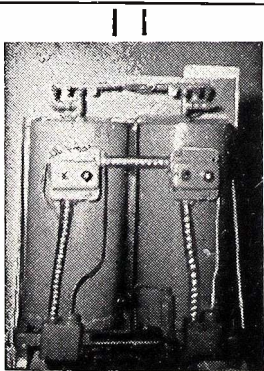
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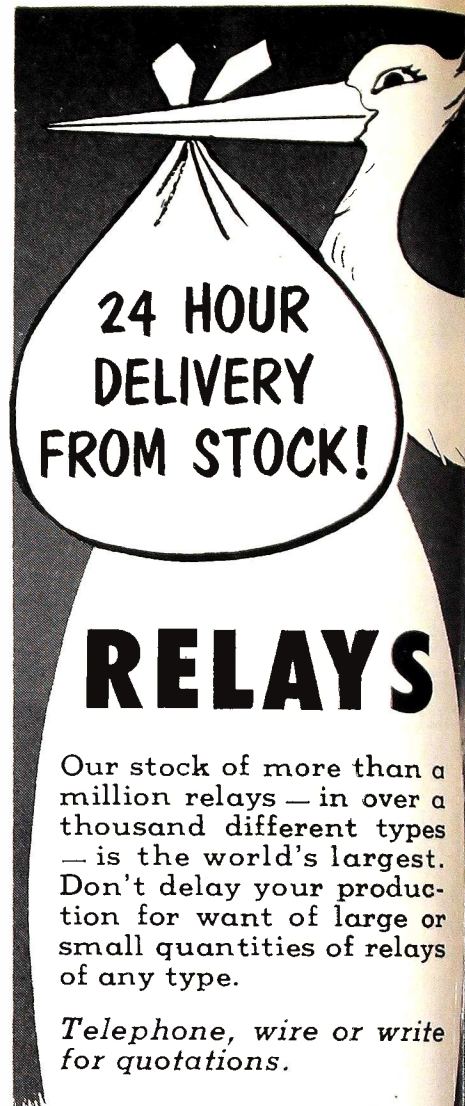
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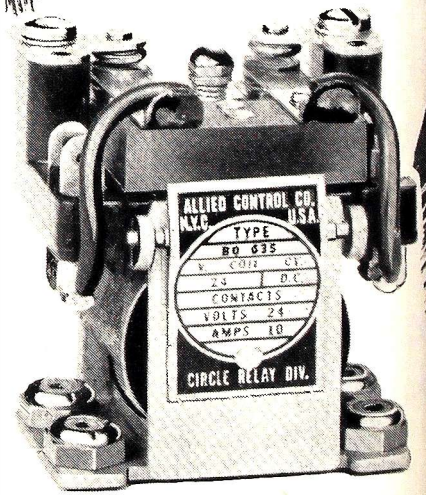
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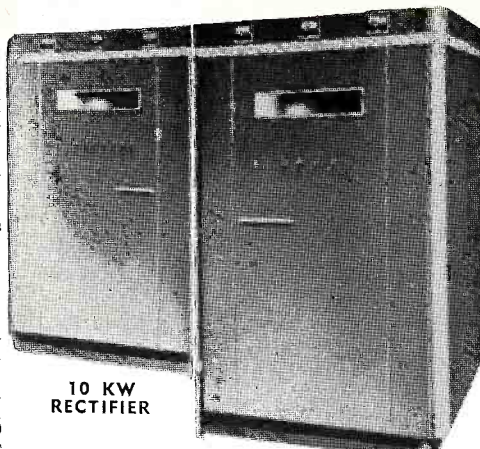
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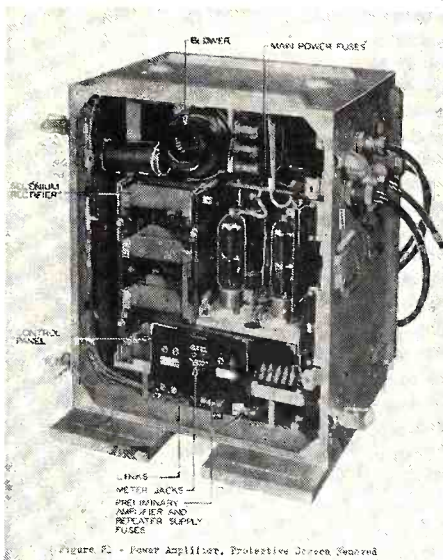
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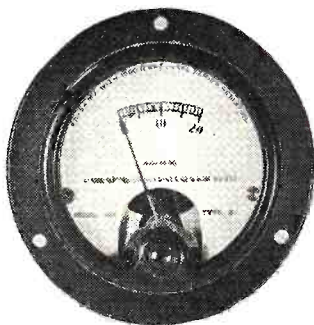
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86	422	457	491	525
87	423	458	492	526
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MID-JUNE, 1953

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CRYSTAL DIODES DUO-DIODES & VARISTORS

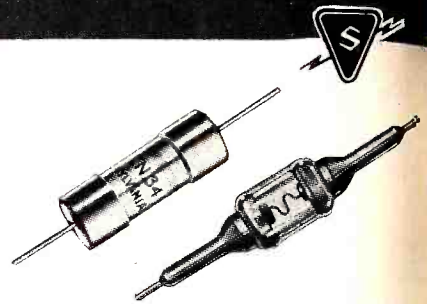
GERMANIUM DIODES AND DUO-DIODES

Type	Cont. Reverse Working Voltage	Reverse Voltage*	Fwd. Curr. at +1v (ma min.)	Av. Anode Current (ma max.)	Reverse Current (μ a max.)
1N34	60v max.	75v min.	5.0	50	50 @-10v; 800 @-50v
1N34A	60v max.	75v min.	5.0	50	30 @-10v; 500 @-50v
1N35**	50v max.	75v min.	7.5	22.5	10 @-10v
1N38	100v max.	120v min.	3.0	50	6 @-3v; 625 @-100v
1N38A	100v max.	120v min.	4.0	50	5 @-3v; 500 @-100v
1N39	200v max.	225v min.	1.5	50	200 @-100v; 800 @-200v
1N54	35v max.	75v min.	5.0	50	10 @-10v
1N54A	50v max.	75v min.	5.0	50	7 @-10v; 100 @-50v
1N55	150v max.	170v min.	3.0	50	300 @-100v; 800 @-150v
1N55A	150v max.	170v min.	4.0	50	500 @-150v
1N56	40v max.	50v min.	15.0	60	300 @-30v
1N56A	40v max.	50v min.	15.0	60	300 @-30v
1N58	100v max.	120v min.	4.0	50	800 @-100v
1N58A	100v max.	120v min.	4.0	50	600 @-100v
1N60	25v max.	30v min.	†	50	†30 @-1.5v

*For zero dynamic resistance.

**Duo-diode consisting of two units matched in the forward direction at +1v so that the current flowing through the higher resistance unit is within 10% of that in the lower resistance unit. Ratings shown for each diode.

†Units are tested in a circuit employing an input of 1.8 volts rms. at 40 mc, 70% modulated at 400 cycles. Demodulated output across a 4700 ohm resistor shunted by 5 μ f. capacitor is a minimum of 1.55 volts peak-to-peak.



Sylvania Germanium Diodes are long-life, lightweight, heaterless components that have found hundreds of applications in clippers, limiters, discriminators and other circuits calling for low power rectification at frequencies up to several hundred megacycles. They have low shunt capacity and no contact potential. Convenient pigtail leads eliminate the need for mounting hardware.

Sylvania Duo-Diodes consist of two matched diodes mounted in a single unit.

Sylvania Varistors, types 1N40, 1N41 and 1N42, consist of 4 specially selected and matched germanium diodes whose resistances are balanced within $\pm 2.5\%$ in the forward direction at 1.5 volts. Sylvania Varistor Type 1N71 consists of 4 matched low impedance diodes, whose forward currents are within a range of 1 ma with +1 volt applied.

Ratings shown are for each diode.

Types 1N40, 1N42 and 1N71 are plug-in type; 1N41 is lug type.

GERMANIUM VARISTORS

Type	Cont. Reverse Working Voltage	Reverse Voltage*	Fwd. Curr. at +1.5v (ma min.)	Av. Anode Current (ma max.)	Recurrent Peak Anode Curr. (ma max.)	Reverse Current (μ a max.)
1N40	25v max.	75v min.	12.75	22.5	60	40 @-10v
1N41	25v max.	75v min.	12.75	22.5	60	40 @-10v
1N42	50v max.	120v min.	12.75	22.5	60	6 @-3v 625 @-100v
1N71	40v max.	50v min.	15 (@+1.0v.)	60	200	300 @-30v

*For zero dynamic resistance.



Sylvania Silicon Diodes 1N21B, 1N21C, 1N23B, 1N25, 1N26 and 1N53 are used chiefly as first detectors in radar and other microwave superheterodyne receivers.

Type 1N79 is designed for use in microwave test probes, power indicators and other instruments.

Types 1N31 and 1N32 are used as video detectors.

MICROWAVE CRYSTAL DIODES

Type	Design Freq. (mc)	Max. Conv. Loss (db)	Max. Output Noise Ratio	Burnout Test	I. F. Imp. (ohms)
1N21B	3,000	6.5	2.0	Bs=2.0 erg	200-800
1N21C	3,000	5.5	1.5	Bs=2.0 erg	200-800
1N23B	10,000	6.5	2.7	Bs=0.3 erg	150-600
1N25	1,000	8.0	2.5	Bp=6.5 watts	100-400
1N26	25,000	8.5	2.5	Bs=0.1 erg	300-600
1N53	"Over 30,000"	8.5	2.5	Bs=0.15 erg	400-800
1N78	16,000	7.5	2.5	Bs=0.3 erg	325-625
1N82	700				

UHF mixer diode—rated in specified circuit

Type	Min. Fig. of merit	Video Imp. (ohms)	Burnout Test	Carrier Freq. (mc)	Video Freq.
1N31	55	6,000-23,000	Bp=0.02 watt	10,000	500 cps-5 mc
1N32	100	5,000-20,000	Bp=0.36 watt	3,000	500 cps-5 mc
1N76		(Rated in specified circuit)		10,000	500 cps-5 mc
1N79		Operating range 0-3,000 mc instrument rectifier			

Bs=total energy in simulated spike of pulse from TR box in radar service.
Bp=peak power pulse under pulsed conditions.



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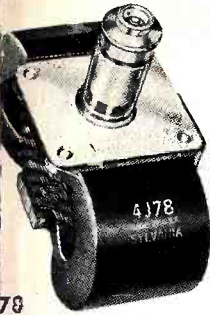


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MICROWAVE COMPONENTS

MAGNETRONS

The Sylvania family of Magnetrons operates in the shf band at peak power levels ranging from 7 to 300 kw and at average power ranging from 14 to 300 watts. 2J42 and 6027 are of the vane type; 4J50, 4J52 and 4J78, hole and slot. All are supplied with magnet. Write for bulletin EC-37C.



Type	Frequency Range (mc)	Pulsed Power Out (kw)	Avg. Power Out (watts)
2J42	9345-9405	7-14	14
4J55	9345-9405	40	40
6027	9345-9405	18-35	18
4J50	9345-9405	300	225
4J52	9345-9405	65-120	65
4J78	9003-9168	300	225

ROCKET TUBES

Sylvania Rocket Tubes are planar-electrode disc-seal triodes for use as oscillators and amplifiers at frequencies up to 3300 mc. Design permits broad band operation. Tuning is simpler and covers a greater continuous range than that of many other types of uhf tubes

2C36 is a pulse-modulated oscillator for frequencies up to 1200 mc.

2C37 is designed for use as a c.w. oscillator up to 3300 mc. Plate disc is flat, grid disc folded.

5764 is a pulse-modulated oscillator for use up to 3300 mc.

5765 is for use as a c.w. oscillator without external feedback in the range from 900 to 3000 mc.

5767 is a c.w. oscillator for use up to 3300 mc. Both discs are folded.

5768 is intended for use as a c.w. amplifier-multiplier up to 3000 mc.

6018 is intended for use as a c.w. amplifier-multiplier up to 3000 mc.

For complete information, write for bulletin ES-4810.

PENCIL TUBES

5794 is intended for use at 1680 mc as a c.w. oscillator.

5876 is intended for use at 1700 mc as a UHF triode for c.w. oscillator, amplifier and frequency multiplier operation.

TR's and ATR's

Sylvania TR and ATR Tubes are used chiefly as automatic electronic transmit-receive switches in radar equipment. Major characteristics of some of the more commonly used types are shown in table. For full data on complete line call your nearest Sylvania sales office.



1B63A

Type	Frequency Range (mc)	Insertion Loss (db)	Max. Recovery Time (u sec at 3-db)
1B24	8490-9600	0.85-1.50	4
1B24A	8490-9600	0.85-1.50	4
1B40	1045-1155	1.0	50
1B55	3360-3740	0.7	15
1B58	2659-2969	0.5	15
1B63	8565-9487 (1)	0.8	4
1B63A	8490-9578 (2)	0.8 max.	4
	8565-9487 (3)		
5853	2900-3200	0.7	15
5865	5450-5825	0.2	0.8
6035	8565-9487	0.7	0.7

(1) 1.6 VSWR. (2) 1.9 VSWR. (3) 1.4 VSWR.

Type	Frequency Range (mc)	Transmitter Peak Power (kw min.)	Tuning Susceptance (mhos)	Arc Loss (db. max.)
1B35A	9000-9600	5	-.06 to +.06	0.8

KLYSTRONS

Sylvania Types 6BL6 and 6BM6 are intended for use as c.w. oscillators. They are of the separate cavity type, with oscillation frequency depending chiefly on external tuning. 6BMA, 5836 and 5837 are suitable for either c.w. or pulsed operation. Write for catalog EC-40B.



6BL6

Type	Mode	Frequency Range (mc)
6BL6	1 $\frac{3}{4}$	1600-4000
	2 $\frac{3}{4}$	2100-4500
	3 $\frac{3}{4}$	4000-5500
6BM6 6BMA	1 $\frac{3}{4}$	550-2300
	2 $\frac{3}{4}$	1100-3000
5836	1 $\frac{3}{4}$	1600-4000
	2 $\frac{3}{4}$	2100-4500
	3 $\frac{3}{4}$	4000-5500
5837	1 $\frac{3}{4}$ 2 $\frac{3}{4}$	550-2300 1100-3000

HYDROGEN THYRATRONS

Sylvania Hydrogen Thyratrons are designed for pulsing service at high repetition frequencies, high peak currents and high voltages. An outstanding feature is very short de-ionization time, which permits an unusually high switching rate.



5C22



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INDUSTRIAL ELECTRONIC TUBES



R4330

FLASH TUBES

Sylvania Flash Tubes, used with suitable equipment, provide blue-white flashes of intense brilliance and extremely short duration. They find extensive use in flash photography, and may also be used in beacons, obstruction markers and signaling devices.

Type R4330 has a maximum rate of 6 flashes a minute, with a peak light output of 12,000,000 lumens and an integrated output of 3,500 lumen-sec. per flash.

STROBOTRONS & TRIGGERTUBES

Sylvania Strobotrons provide a means of "freezing" the motion of rotating or reciprocating machinery. Type 1D21/SN4 produces neon-red flashes at rates up to 240 per second. SA-309 produces bluish-white light pulses, and is ideal for applications where true-color viewing is essential. Maximum flashing rate of the SA-309 is 100 per second.

Triggertube Type 0A5 provides a convenient means of triggering any of the above Strobotrons from very low current sources. Type 0A5 may also be used for other electronic relay and for regular Strobotron purposes.



1D21/SN

GLOW MODULATOR TUBES

Light output of Sylvania Glow Modulator Tubes varies in an essentially linear manner with the current passing through the tubes. Tubes are of the crater type, providing high ionization density.



R1130B

	R1130B	R1131C
Operating Voltage, max.	150	150
Operating current, ma	5-35	3-25
Modulating Freq. Range, cps	15-15,000	15-15,000
Useful Light Range, Angstroms	3,500-6,500	3,500-6,500
Crater Diameter, inches	.056	.093

GAS DISCHARGE TUBE PIRANI TUBE—TYPE R1111



Sylvania Pirani Tube, Type R1111, is convenient for measuring low gas pressures directly. When used with suitable auxiliary equipment, rapid, continuous readings may be obtained with a precision of 5%. The useful pressure range is from one to one thousand microns. It is extremely useful as a pressure gage and leak detector in evacuating apparatus or in automatic pressure control and recording equipment.

Average Characteristics and Ratings

Mechanical Specifications

Envelope . . . Nonex Glass (8" max. Leng. 1-1/16" max. Dia.) Terminal Connections . . . Unpolarized

Electrical Ratings

Resistance (Cold) . . . 6.6 ohms
Resistance (Hot—evacuated tube, 100 μ a. current) . . . 15.5-17.0 ohms
Operating Voltage . . . 1.5 volts

MISCELLANEOUS TUBES

SD-759A Ramberg Accelerometer

The Accelerometer is an electronic tube useful in measuring linear acceleration. Its operating range is from 1 to 50 g's. Operates at plate voltage of 10 volts per plate.

X-6090 Ionization Tube

The Sylvania X-6090 Ionization Tube has an ozone output of approximately 5 mg per hour under typical operating conditions. Operating voltage is approximately 3,200 volts ac.

Complete information on all Electronics Division products is available at the following Electronics Division Sales Offices:

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ELECTRONICS DIVISION LITERATURE

Germanium Diode Applications Literature

These books comprise the most complete collection of germanium diode applications ever published. "40 Uses for Germanium Diodes" covers applications in receiver, transmitter instruments and control circuits. "Electronics Shortcuts for Hobbyists" describes applications in all types of devices of interest to the home hobbyist, "screwdriver mechanic," and electrical experimenter. "Crystal Diode Circuit Kinks" describes many new applications of germanium diodes in crystal meters, TV receivers, and electrical experiments. Price of each book—25¢.



FREE ELECTRONICS DIVISION CATALOG SHEETS

Catalog Number

- Crystal Diode Replacement Guide.....
- Sylvania Rocket Tubes (Planar Triodes) ES-4810
- Sylvania Glow Modulator Tubes Types 1B59/R1130B & R1131C... EC-15B
- Pirani Tube—Type R1111..... EC-14B
- Electronic Tubes EC-20H
- Flash Tube—Type R4330..... EC-23A
- Hydrogen Thyatron Type 5C22..... EC-25
- Strobrotron Type SN4—& 1D21..... EC-26
- Triggertube Type 0A5 EC-31
- Germanium Crystal Diodes EC-36D
- Magnetrons EC-37C
- Microwave Crystal Rectifiers EC-38
- Sylvania Selenium Rectifiers EC-39B
- Broadband Reflex Klystrons EC-40B

For literature described on this page, write:

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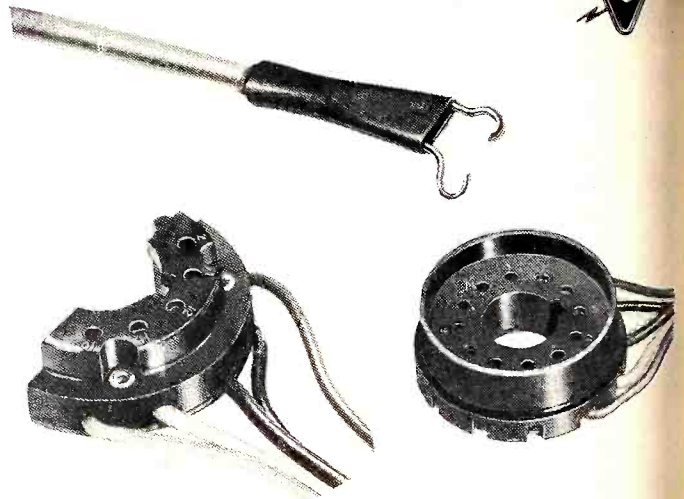
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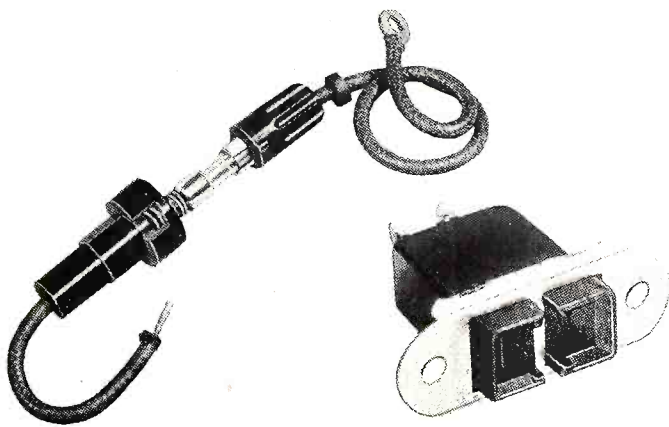
Today Sylvania offers you the ideal solution to any parts problem. Now, due to greatly increased production facilities and improved techniques, Sylvania is in a position to provide highest quality precision components to meet any volume requirements.

On these pages are illustrated a few representative types of the many hundreds of Sylvania electronic components now being produced. So, whether you need a few thousand parts or a million a month, put it up to Sylvania. Address your inquiries to Sylvania Electric Products Inc., Dept. 3A-46, 1740 Broadway, N. Y., N. Y.



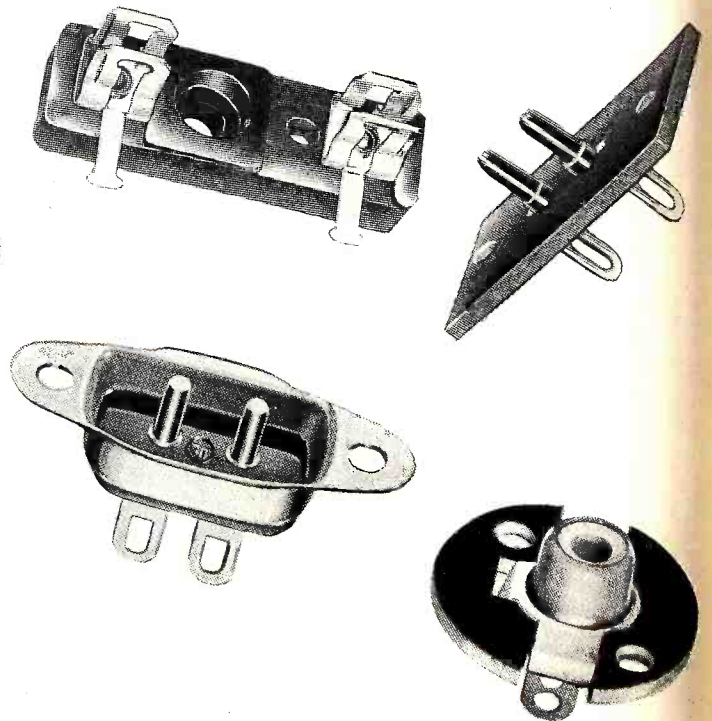
CATHODE RAY TUBE SOCKETS

Are available in types to meet any equipment design specifications. Full-round and half-round duo-decal sockets furnished complete with color-coded lead wires. New spring-type anode connector furnished to meet the requirements of any manufacturer.



PLUGS AND CONNECTORS

Finest quality plugs and connectors are now offered by Sylvania to meet every need. Standard units include antenna jacks and plugs, interlock plugs, battery plugs, speaker plugs, bathtub and power receptacles and auto fuse holders. Metal contacts cadmium-plated brass.

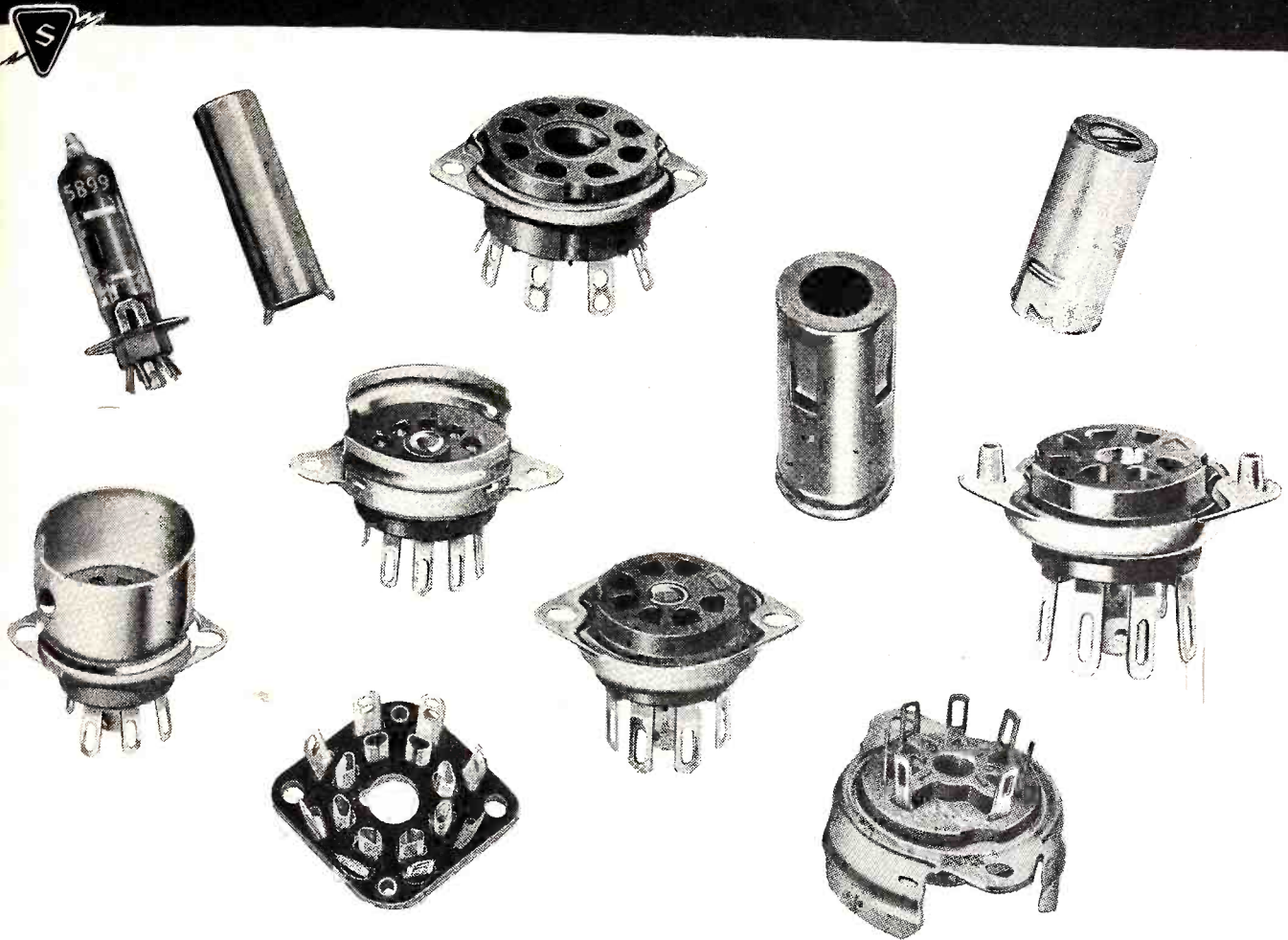


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SYLVANIA ELECTRONIC COMPONENTS



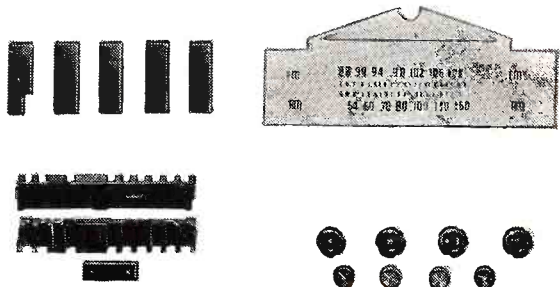
RADIO TUBE SOCKETS AND SHIELDS

Sylvania's complete line of tube sockets includes both molded and laminated types made to rigid specifications. Molded sockets are available for button type sub-miniature, 7 and 9 pin miniature and octal tubes, vibrators and GRC octals, UHF sockets and integral eyelet sockets. Sockets are supplied with either top or bottom mounting, a

wide variety of saddles with or without ground lugs, and with or without center shield. Contacts are of brass, phosphor bronze or beryllium copper, cadmium or silver plated. Various socket insulators include general purpose phenolic, low-loss phenolic, or NEMA grade laminated phenolic. All made to Sylvania's highest quality standards.

MOLDED PLASTICS

Sylvania is equipped to offer manufacturers the widest possible variety of injection or compression molded plastic parts of highest precision and durability. These include Push Buttons, Escutcheon Dials, Terminal Blocks, Knobs and many others. Tell us your problems and we'll be glad to suggest an economical solution.

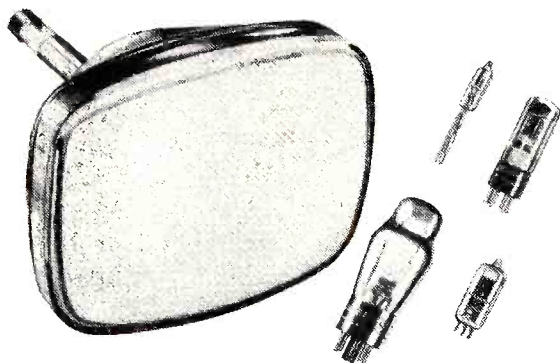


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TO ASSURE FINEST TELEVISION SET PERFORMANCE

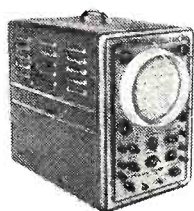


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Quality tested and engineered to highest standards, Sylvania tubes have earned a world-wide reputation for finest performance. Today 7 of the 10 leading television set makers use Sylvania Picture Tubes and Sylvania Receiving Tubes.

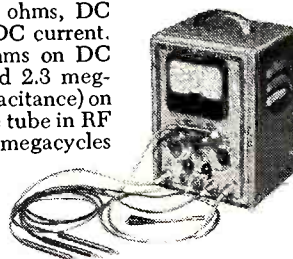
In test equipment, too, Sylvania quality-built components and improved circuit engineering assure you of the last word in accuracy and dependability.

Television Oscilloscope—An exceptionally high-gain wide-band oscilloscope designed for television. Accurately displays any TV pulse or wave-shape on a large, eye-saving 7" screen. Sensitivity: 0:01 v./in. Vert. response useful to 4.0 mc. Recommended for servicemen; laboratories; advanced schools and industry. Price: \$249.50.



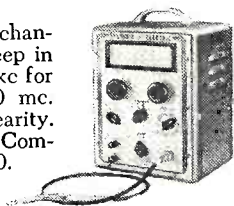
Voltage Calibrator—Accurately measures peak to peak voltage of any wave-form displayed on scope. Uses voltage regulated clipper circuit to give extreme accuracy in spite of line voltage fluctuation. Switch feeds either calibrating voltage or signal voltage to scope. Essential instrument for better service shops and laboratories. Price: \$44.50.

Polymeter—A Vacuum Tube Voltmeter of high sensitivity for measuring ohms, DC volts, AC volts, RF volts and DC current. Input impedance is 17 megohms on DC volts, 2.7 megohms on AC and 2.3 megohms (with only 3 μ f shunt capacitance) on RF. Special subminiature diode tube in RF probe gives flat response to 300 megacycles on scales from 3 volts to 300 volts in five ranges. Zero center seals for FM. Illuminated meter. Accessory probes (type 225) for 30,000 volts DC. Price: \$99.50.



High Voltage Probes—These fine quality Sylvania DC Probes permit the measuring of high voltages by increasing the DC range of polymeters. Type 223 is 10,000 volt probe (\$9.95). Other types extend Polymeter range to 30KV (\$12.50).

Type 500 Sweep Generator—No mechanical sweep. Uses reactance tube sweep in two ranges; 0-15 mc for TV, 0-600 kc for FM. Fundamentals from 2 to 230 mc. Special circuits to assure extreme linearity. Output 300 to 100,000 microvolts. Companion to 501 Marker. Price: \$139.50.



Marker Generator (Type 501)—Provides 2 separate signals for marking an oscilloscope trace of response curves. Accurate adjustment of traps, frequency spotting, measuring band width, and correct adjustment of the popular 4.5 mc. intercarrier sound circuits. VFO covers 15 to 240 mc. range. Price: \$129.50.



Modulation Meter—Directly indicates per cent of AM modulation. Compact; requires no direct connection to circuit. Used by amateurs, transmitter builders and others. Indicates carrier shift. Price: \$29.50.



For further information concerning Sylvania Tubes or Test Equipment address: Sylvania Electric Products Inc., Dept. 3R-46, 1740 Broadway, N. Y. 19, N. Y.

Tube Testers—219 counter type, 220 portable type. Composite mutual conductance and emission checker rejects tubes failing either requirement. Relative amount of heater-cathode and inter-element shorts or leakage shown on METER. Designed by a tube manufacturer to check tubes for modern applications. Price: \$114.50.



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REFERENCE SHEET SECTION

POPULAR FEATURE of **ELECTRONICS** since the first issue of this magazine has been its Reference Sheets, pages that constitute graphical and tabular shortcuts for engineers who design, produce, install and maintain equipment. Presented in the following pages are 36 of the articles that have proven generally useful

The Editors

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AIR BREAKDOWN CHART

FOR RADAR PULSES

Chart gives approximate breakdown voltage between conductors in air in the three major frequency ranges that are related to the mean free path of electrons in air. Chief use is design of high-voltage pulse circuit components for radar installations

USE of high-power pulses in radar depends on the dielectric strength of air. The design of equipment to handle these pulses should be based on estimates of the breakdown voltage in the air gaps between conductors. The various configurations of the conductor contours make such estimates difficult, but a few simple rules and the accompanying chart are a great help.

The primary purpose of the chart is to show the variation of breakdown voltage with frequency. Breakdown by an alternating voltage is an effect of cumulative ionization by collision during successive cycles of alternation. At high frequencies, such that the electrons and ions oscillate in the field without reaching the electrodes, the free charges accumulate until the ionization and recombination rates reach equilibrium.

At low frequencies, such that the electrons and ions would oscillate further than the distance between electrodes, the free charges are partially collected during each cycle and hence do not accumulate. Consequently the breakdown gradient is greater at lower frequencies. Likewise, the breakdown gradient is greater in smaller distances, which also facilitate the clean-up. These effects are summarized by the three curves on the chart.

The transition between the

By **HAROLD A. WHEELER**

medium-frequency and high-frequency curves occurs at certain frequencies and pressures, as indicated for a few cases that have been tested. At high frequencies the gradient is constant (2.9 kv per mm at one atmosphere pressure).

Transition Frequencies

If the distance is of the order of 1,000 times the mean free path of electrons in the air, this transition between middle and lower curves occurs at frequencies of the order of 100 mc, as shown on the chart. This relation is independent of the pressure, although the value of the mean free path is inversely proportional to the pressure. In other words, the product of pressure times distance is proportional to the ratio of distance over mean free path. This is the reason why a single family of curves is valid over a great range of pressure and distance.

The transition between the upper and middle curves (not shown) occurs at frequencies about 1/100th as great, since the velocity of ions is less than that of electrons in about this ratio, and their mean free path is nearly the same.

In either case, the transition occurs at a value of pressure-times-distance which is inversely proportional to the frequency.

Uniform Gradient

The simplest case for computation and formulation is a uniform voltage gradient between parallel plane conductors. Ordinary configurations have a peak gradient greater than the average, so the maximum gradient may be taken as a criterion of breakdown over a certain distance. This is valid at high frequencies; at lower frequencies the correct criterion is somewhere between the maximum and the average gradient, usually closer to the maximum.

A uniform gradient causes no corona, just a well-defined spark. A maximum gradient much greater than the average gradient causes corona below the sparking voltage, which expedites the final breakdown when the voltage is increased to that point. At high frequencies, it is even possible to have a breakdown (ball of fire) in a limited space separated from the electrodes.

At low frequencies, there can be no spark in a gas at a voltage less than a certain value (about 0.3 kv in air), because the electrons are collected before they can gather sufficient momentum. At high frequencies, this rule fails because most of the elec-

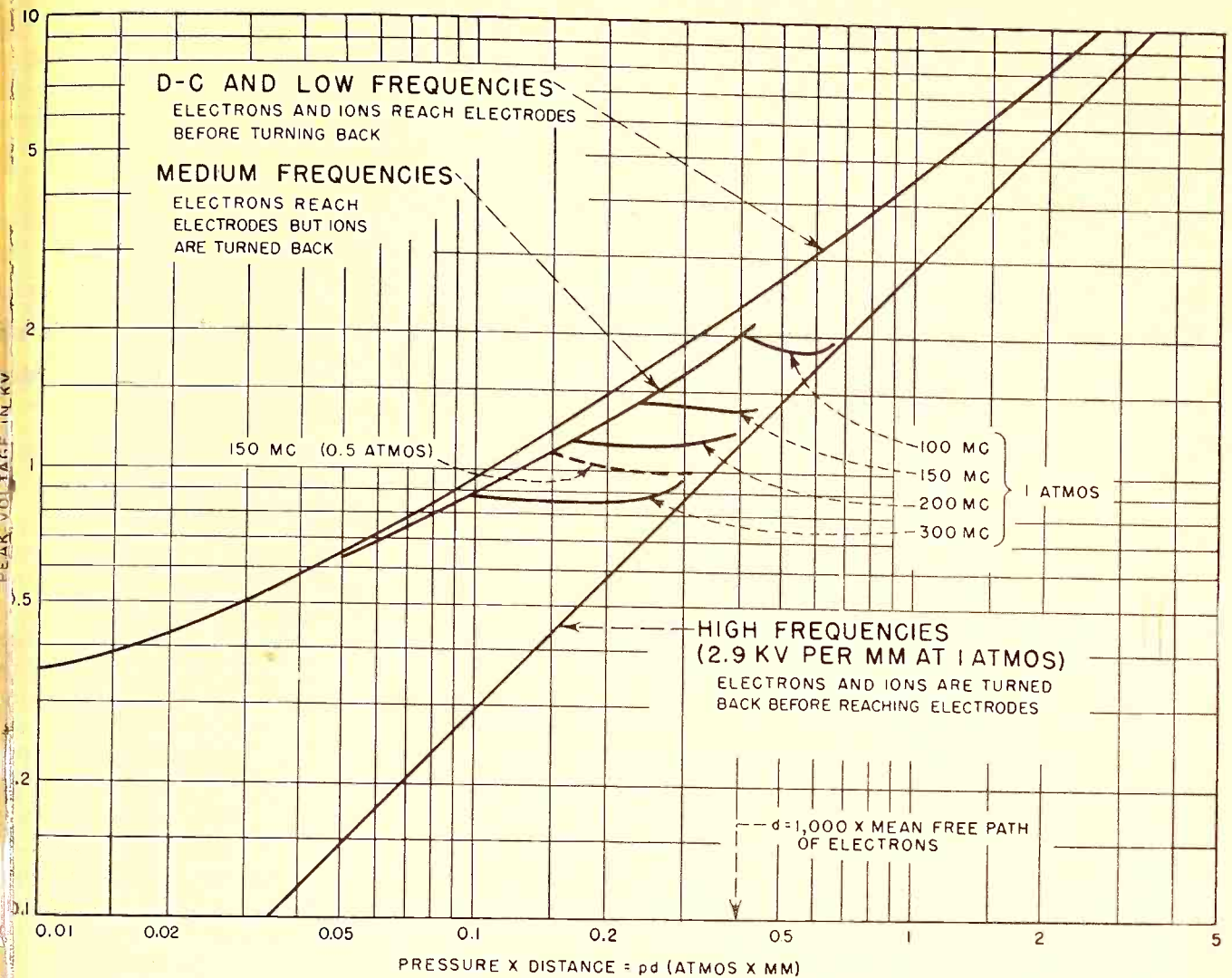


Chart giving breakdown voltage in air between parallel planes. For atmospheric pressure, horizontal scale represents distance in millimeters between the plane electrodes

ns oscillate without reaching electrode.

Experimental Basis

The chart is based on a steady alternating voltage (unmodulated c-w). Short pulses of dielectric voltage (of the order of one microsecond) occurring at much longer intervals (of the order of one millisecond) stop before equilibrium is reached, so their breakdown voltage is naturally somewhat greater than that of a steady direct voltage, the highest curve on the chart. Such short pulses of high-frequency voltage have been presumed to show a similar tendency relative to the first curve, and there is some experimental evidence to this effect.

The chart is valid at lower

pressures, provided that the distance is many times the mean free path of electrons, which is true over the range plotted.

In general, there is a scarcity of reliable experimental evidence either to support or to contradict these curves. It is expected that they will be verified under controlled conditions by providing some continuous supply of electrons. This supply may come from corona or other localized discharge, ultra-violet rays, x-rays or gamma rays, but hardly from thermal agitation at ambient temperatures common in electronics equipment (usually under 100C). Therefore a somewhat higher breakdown voltage may be fairly certain if such sources are precluded by design. This is especially true of short

pulses such as mentioned above. However, cosmic rays arrive about once per hour per square millimeter, and cannot be stopped by reasonable shielding.

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BANDWIDTH NOMOGRAPH

FOR PULSE FILTER NETWORK

Gives minimum bandwidth required for adequate transmission of a periodic rectangular pulse, based on spectral distribution of pulse energy, for any selected efficiency of ideal and R-C filters. Law of diminishing returns applies to bandwidth increases

By B. L. ADAMS and T. M. STOUT

WHEN A PULSE or other signal is applied to a filter with limited bandwidth, the output is a distorted version of the input because some of the frequency components of the signal are attenuated or eliminated. The importance of these components can be measured by the energy which they represent, so it is commonly stated that "such distortion is minimized by the selection of a frequency band sufficiently wide to include nearly all of the total energy of the frequency components."¹

This observation appears frequently in the literature and the principle is well understood. Quantitative application of this idea, however, appears to have been limited to simple cases involving periodic signals or to elegant attacks on the problem of

optimizing performance in the presence of noise.

Periodic Inputs

For a periodic input, the various harmonic components can be found by Fourier analysis; the Fourier series for a number of common periodic waves are readily available in the literature². The power represented by any harmonic can be found by squaring its magnitude, and the combined power of several components is found by addition. In the case of a square wave, for example, the magnitudes vary inversely with n , the order of the harmonic, where $n = 1, 3, 5, \dots$. From this information, one readily determines that the fundamental component of the square wave accounts for 81.1 percent of the total power and

that higher harmonics contribute as shown in the following table:

Highest Harmonic Included	Percent Power
1	81.1
3	90.1
5	93.5
7	95.0
9	96.1
11	96.7
13	97.2

Single-Pulse Inputs

For periodic inputs, such as a rectangular pulse, the frequency components are not distinct but form a continuous spectrum. The relative magnitudes are again determined by Fourier analysis, using the Fourier integral.

The actual signal energy in any portion of the frequency spectrum is found by squaring amplitudes and integrating with

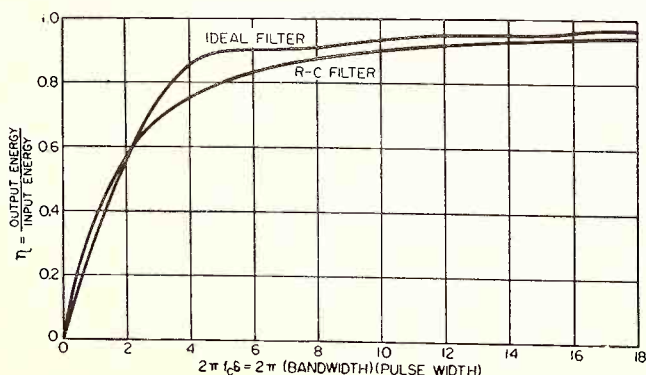


FIG. 1—Transmission efficiency for rectangular pulse input

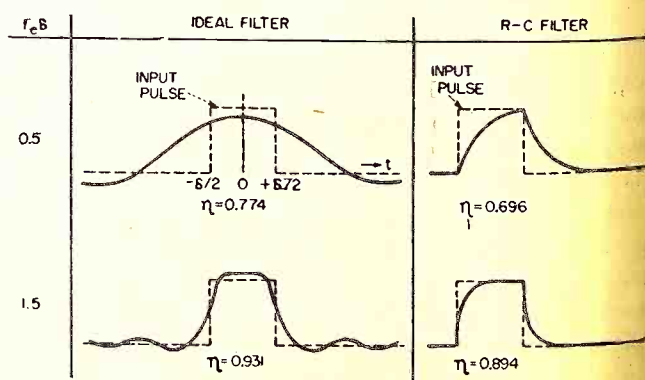


FIG. 2—Responses of filters for rectangular input pulses

ect to frequency over the re-
id interval.

the signal is an isolated
angular pulse of width δ , the
energy spectrum is³

$$E(f) = \frac{\delta}{2\pi} \left[\frac{\sin \pi f \delta}{\pi f \delta} \right] \quad (1)$$

uring and integrating, the
ion of the total energy in
and between zero frequency
an upper limit f_0 is found

$$\frac{2}{\pi} \left[\frac{\cos 2\pi f_0 \delta - 1}{2\pi f_0 \delta} \right] \text{Si}(2\pi f_0 \delta) \quad (2)$$

Si($2\pi f_0 \delta$) is the sine in-
l, a function which has been
uted and tabulated^{4,5}.

Strictly speaking, an energy
tribution computed in this
describes only the input sig-
a network. When the net-
is the so-called ideal filter,
er, whose gain is one for
and zero for $f > f_0$, the
s from Eq. 2 represent the
of output to input energy.
epresented in this way, the
y distribution can be re-
ed as defining an efficiency
ransmission which bears
relation to the fidelity of
l reproduction.

Design of Practical Filters

practical filters, this same
ncy can be calculated from
frequency or time in-
ation, by analytical or
ical methods. For a simple
ance-capacitance low-pass
whose cutoff frequency is
d as $f_0 = 1/2\pi RC$, the ratio
tput to input energy is

$$1 - \frac{1}{2\pi f_0 \delta} \left[-e^{-2\pi f_0 \delta} \right] \quad (3)$$

es computed from Eq. 2 and
rplotted in Fig. 1. The two
s are similar in shape and
ect at $\eta = 0.57$, where f_0
approximately equal to $1/\pi\delta$.
lose correspondence be-
the two curves is due in
to the fortunate choice of
-3 db or half-power point
ining the cutoff frequency
R-C filter.

relation between network

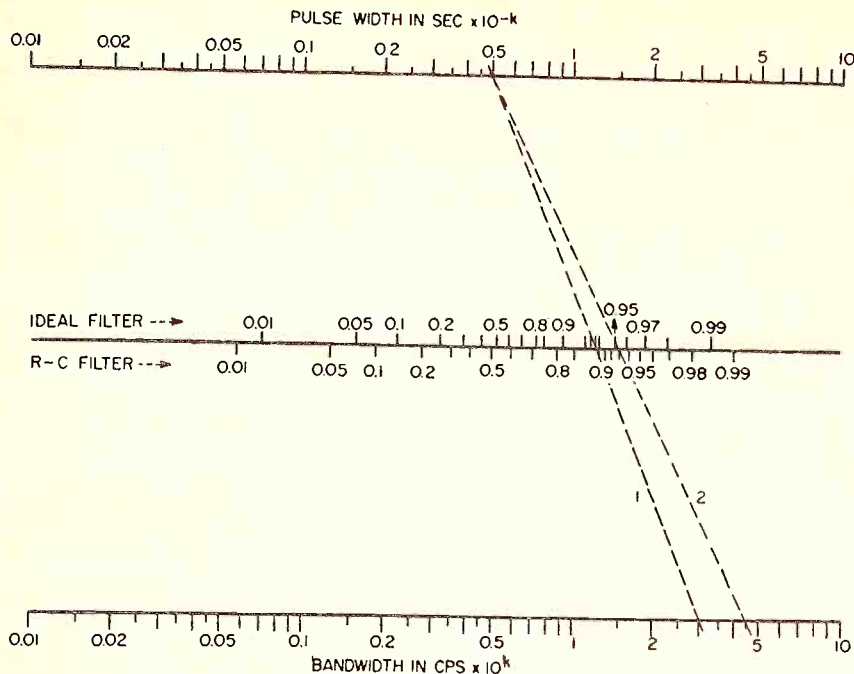


FIG. 3—Nomograph relating efficiency, bandwidth and pulse width. Multiplier k is zero when using seconds for pulse width and cycles per second for bandwidth; any other consistent units may be used, such as $k=3$ for milliseconds and kc or $k=6$ for microseconds and mc

efficiency and quality of pulse reproduction is suggested in Fig. 2, which shows typical pulse responses for ideal and R-C filters. From these pictures one might conclude that 70–75 percent efficiency is a minimum standard, that 90–95 percent is preferable, and that an even higher figure might be better.

In selecting bandwidth, however, consideration should be given to signal-to-noise ratio. In the absence of detailed information, it is probably good policy to use the minimum bandwidth consistent with adequate signal reproduction. In this connection, Fig. 1 shows clearly a law of diminishing returns in increasing bandwidth. For a given pulse width, an increase in efficiency from 90 to 95 percent requires doubling the bandwidth; a further increase to 99 percent requires a further multiplication of bandwidth by five.

Bandwidth Nomograph

Calculations of network bandwidth are simplified by the use of the nomograph shown in Fig. 3. A straight line drawn between points on the upper and lower

scales determines the network efficiency for the given pulse width and bandwidth, for either the ideal filter or R-C filter, depending on which center scale is used. A multiplier is included on the pulse width and bandwidth scales to emphasize that any consistent units may be used, such as seconds and cycles per second, milliseconds and kilocycles or microseconds and megacycles.

Example of Use

As a sample problem, suppose that a 0.5-microsecond pulse is to be transmitted by an ideal filter with an efficiency of 93 percent. Line 1 on the nomograph gives the required bandwidth of three megacycles. According to line 2, somewhat greater bandwidth (4.5 megacycles) is required with an R-C filter.

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GAIN-BANDWIDTH NOMOGRAPH

Equations involved in design of single-tuned amplifier circuits are incorporated in one large nomograph to speed up design calculations. Shows overall effect of varying the parameters when seeking the most economical tube arrangement for desired gain and bandwidth

THE design of vacuum-tube amplifiers involves determining the maximum gain and/or bandwidth using the most economical tube arrangement. The most practical first-approximation calculation for single-tuned circuits such as cascaded synchronously tuned i-f stages was found to be $G_m/2\pi C_i$, and the nomograph on the following page was therefore based on this ratio. The nomograph encompasses all of the interdependent equations used in amplifier design, hence shows the effect of variations in each parameter on the others.

Practical values of G_m and C_i that include the effect of the coupling networks can be found by taking approximately 85 percent of the maximum G_m and 160 percent of the value of C_i given in tube manufacturer's data. This makes the usable gain-bandwidth about 53 percent of the ideal, or roughly one-half. This relationship is found in Table I.

The nomograph solves the following equations:

$$Q = f_o/B \quad (1)$$

$$A = G_m \times R_L \quad (2)$$

$$AB = A \times B \quad (3)$$

$$AB = G_m/2\pi C_i \quad (4)$$

$$B = 1/2\pi C_i R_L \quad (5)$$

$$A_{max} = 1/2\pi f_o C_{GP} R_L \quad (6)$$

where $Q = R \omega C =$ circuit quality, $f_o =$ circuit resonant frequency, $B =$ 3-db bandwidth, $A =$ stage gain, $G_m =$ tube

By CHESTER W. YOUNG

transconductance, $R_L =$ total damping resistance, $C_i =$ total shunt capacitance, $A_{max} =$ maximum usable gain, and $C_{GP} =$ total effective grid-plate capacitance.

Since the bandwidth between two 3-db frequencies of a tuned circuit is equal to the 3-db frequency of a parallel or series R-C circuit, the nomograph can be used also for video types of circuits. Also, as Eq. 5 states that bandwidth is independent of L , the nomograph ignores L . Use

Table I—Examples of Ideal and Practical Tube Capacitances

IDEAL				
Tube Type	C_o $\mu\mu f$	C_p $\mu\mu f$	C_i $\mu\mu f$	G_m/C_i mc
6AC7	11.0	5.0	16.0	562
6AK5	4.0	2.8	6.8	750
PRACTICAL				
Tube Type	C_{in} $\mu\mu f$	C_{out} $\mu\mu f$	C_i $\mu\mu f$	G_m/C_i mc
6AC7	17.0	8.0	25.0	312
6AK5	6.7	4.4	11.1	378

of this nomograph is best illustrated by an example.

If the known values are $f_o = 30$ mc, $B = 1$ mc, $C_i = 16 \mu\mu f$, $G_m = 5,000$, and $C_{OP} = 0.0082 \mu\mu f$, find the values of Q , AB , A , R_L and A_{max} .

Step 1: Align points $f_o = 30$ mc and $B = 1$ mc, and read $Q = 30$.

Step 2: Align points $C_i = 16 \mu\mu f$ and $G_m = 5,000$, and read $AB = 50$ mc.

Step 3. Align $AB = 50$ mc and $B = 1$ mc, and read $A = 50$.

Step 4: Align $A = 50$ and $G_m = 5,000$, and read $R_L = 10,000$.

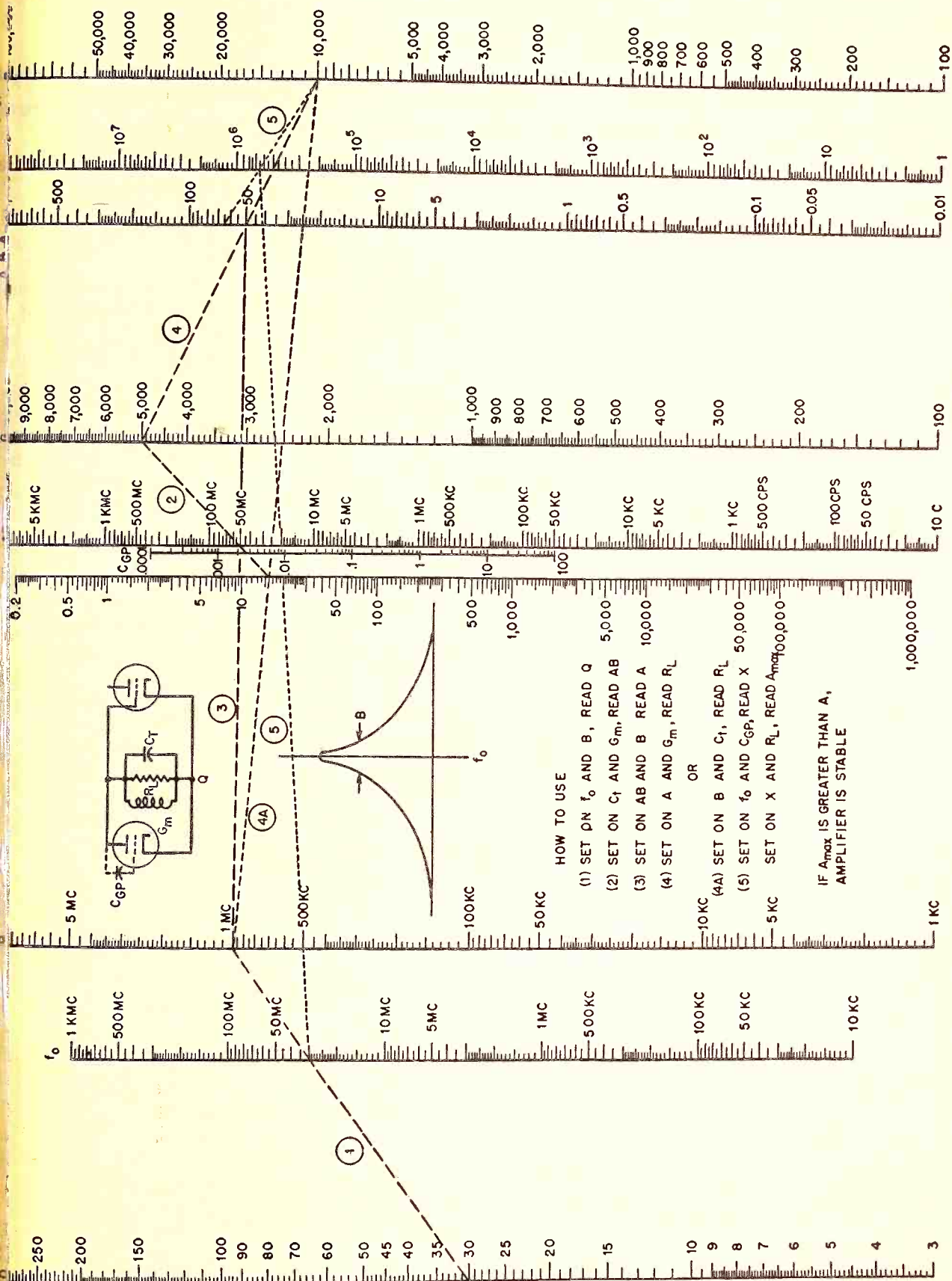
Step 4 (alternate): Since the loading resistance is directly related to bandwidth and shunt capacitance by means of Eq. 5, it may be found by aligning $B = 1$ mc and $C_i = 16 \mu\mu f$, giving $R_L = 10,000$ ohms as before.

Step 5: To ascertain whether $A = 50$ in Step 3 is a stable value of gain, a criterion of feedback through the tube grid-plate capacitance causing oscillation is determined. If the attenuation from plate to grid is set equal to the amplification from grid to plate as the critical value, then the desired gain must be less than the maximum usable gain. The value A_{max} is approximated by dividing R_L by the reactance of C_{OP} and thinking of this attenuation as a negative gain. This holds true when the input and output impedance are the

as in a multistage synchronous tuned i-f amplifier. The value of C_{GP} is determined by aligning $f_o = 30$ mc and C_{GP}

$= 0.0082 \mu\mu\text{f}$ and reading $X = 6.5 \times 10^5$ ohms. Now align this value of X and $R_L = 10,000$ and read the maximum usable gain

as 65 on the A_{max} scale. This value is greater than the desired gain of 50, so the amplifier is deemed to be stable.



Nomogram for designing single-tuned amplifier circuits like that shown. Numbered dashed lines indicate order of steps in designing an amplifier for desired stage gain and bandwidth and checking its stability

CHART FOR TE₁₁ MODE PISTON ATTENUATOR

Nomograph speeds finding attenuation constant for cylindrical waveguide operated in TE₁₁ mode below cutoff. May be used to design piston attenuators with minimum frequency dependence over given range

PISTON attenuators are useful because of their linear decibel scale and potentially high accuracy.¹ However, their attenuation constant is a slowly changing function of frequency due to the proximity of operating frequency to cutoff frequency and the frequency dependence of skin-depth.

The nomograph expedites determination of the attenuation constant, A , for the TE₁₁ mode in cylindrical waveguide. Effect of skin-depth is negligible for the TM₀₁ mode and nomographs

By CHARLES M. ALLRED

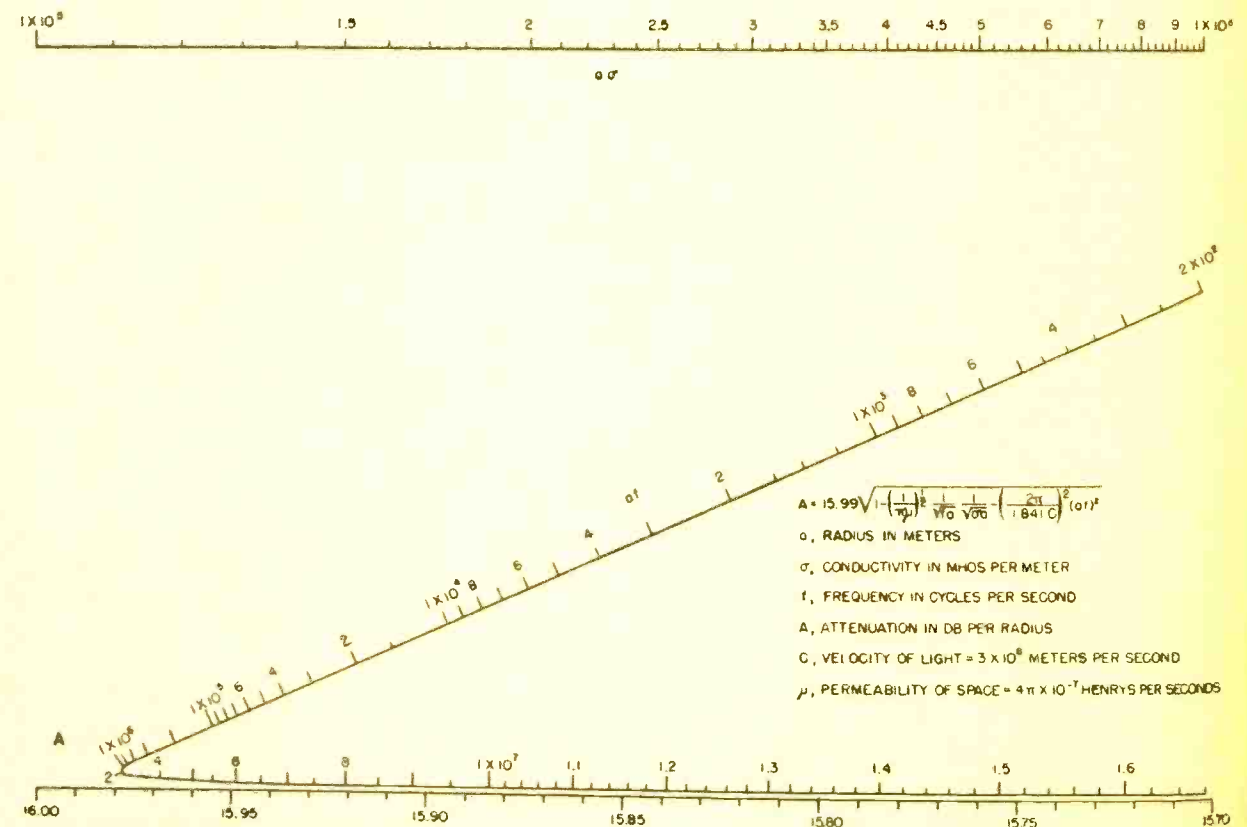
for this mode and the TE₁₁ mode for the case of infinite conductivity are available.²

The nomograph may be used to design attenuators having minimum frequency dependence over a given range and to determine that dependence after fabrication. In the latter case, consider radius $a = 2$ cm, conductivity $\sigma = 1.5 \times 10^7$ mhos per meter, and the frequency f

$= 1 \times 10^8$ cycles per second; then $a\sigma = 3 \times 10^5$ mhos, $af = 2 \times 10^4$ meters per second and extension to the A scale of a straight line through these points gives 15.94 db per radius for A . In attenuator design, choose values of a and σ to place the operating point at the right of the $a\sigma$ scale and about the knee of the af scale.

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This TE₁₁ mode piston attenuator chart shows dependence of attenuation constant on frequency, conductivity and radius in cylindrical waveguide

STAGGER-TUNED I-F DESIGN

Chart gives overall bandwidth for 3 db and any fractions of 3 db, for i-f amplifiers having 1 to 500 synchronous or stagger-tuned stages and up to 5 elements per stage

THE BANDWIDTH reduction factor R is here plotted as a function of the number of single or multituned stages n in the amplifier. The family parameter m represents the number of tuning elements in the interstage coupling network when all stages are synchronously tuned; thus, $n = 1$ for a simple RLC tuned interstage, and $m = 2$ for a double-tuned interstage. For a stagger-tuned amplifier, n is the number of n -uples and m is the number of elements in the general n -uple.

Example 1: Assume an amplifier is to have 8 stages using identical single-tuned interstage couplings. (a) For what 3-db bandwidth must each stage be designed if the overall bandwidth is to be 6 mc? (b) What will be the 0.5-db bandwidth?

Solution. (a) From the curves for $n = 8$ and $m = 1$, $R = 0.3$. Dividing overall bandwidth of 6 mc by this value of R gives 20 mc as the required bandwidth of each stage. (b) If n' stages cascaded give a certain 3-db bandwidth, each stage must be

By **MATTHEW T. LEBENBAUM**

down by $3/n'$ db and n of them will be down $(3/n') n = x$ db at that bandwidth. To determine the x -db bandwidth then, the R factor is determined for a number of stages n' where $n' = n (3/x)$; here n is the actual number of stages and $x < 3$ db. In the case at hand, $n' = 8 \times (3/0.5) = 48$, and $R = 0.12$ from the chart. The 0.5-db-down bandwidth then is 0.12×20 or 2.4 mc.

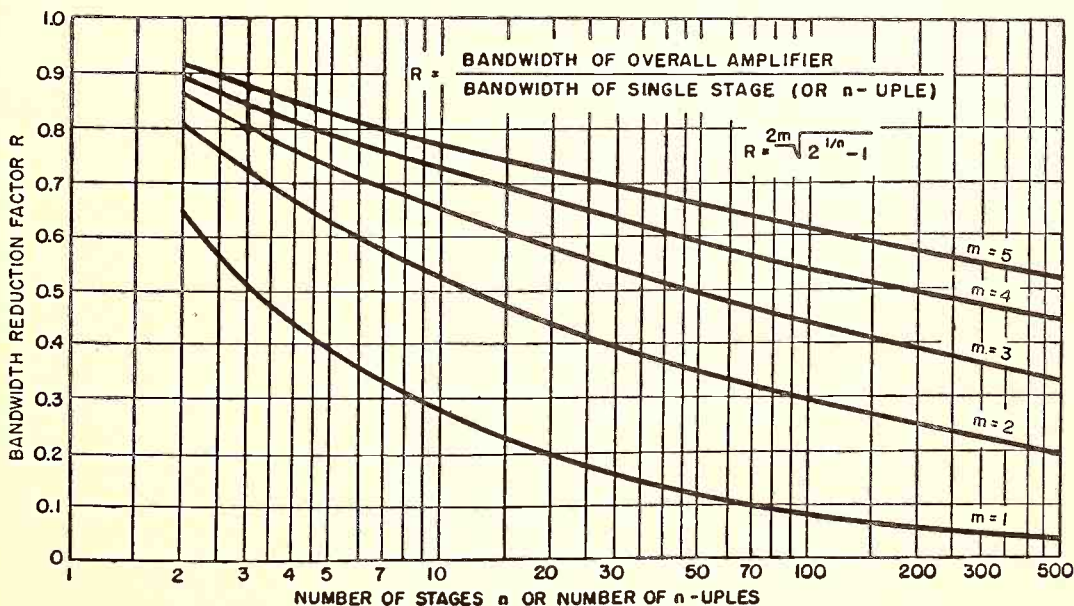
Example 2: An amplifier is to be built with an overall bandwidth of 20 mc and overall gain of 80 db; 6AK5 tubes are used with an assumed gain-bandwidth product ($g_m/2\pi C_T$) of 70 mc. (a) What is the minimum staggering required to achieve this result with 12 or less tubes? (b) If equally loaded double-tuned circuits were used (gain-bandwidth = $\sqrt{2} g_m/2\pi C_T$), how many stages would be required?

Solution. (a) Assume a value

of n , and determine R from the curve. This fixes the single-stage bandwidth required. From this, the gain per stage may be calculated from the gain-bandwidth product, and from this the overall gain. It will be found that it is impossible to achieve the desired gain with a synchronous single-tuned amplifier. Twelve stages arranged in six staggered pairs will not give the desired gain, either, but 9 stages arranged in triples or 8 in quadruples will. Possible systems are:

n/m	Tubes	db gain
6/2	12	75.5
3/3	9	80.5
4/3	12	102
2/4	8	80

(b) 12 double-tuned interstages give $R = 0.49$ ($n = 12$, $m = 2$). The overall gain then is 91.6 db for the desired bandwidth. This illustrates the superiority of multituned coupling over the corresponding order of staggering (91.6 db versus 75.5 db for the same number of staggered-pair tubes). Increasing the staggering to triples makes staggering still better, 102 db.



MICROWAVE DIFFRACTION CHARTS

The radius of the first Fresnel zone at various distances from the nearest terminal end of a microwave relay course can be determined from one nomogram. The adjusted distance required in Fresnel zone calculations is shown in the second alignment chart

By EARL D. HILBURN

MICROWAVE SIGNALS over line-of-sight courses are frequently observed to depart considerably from the free-space predictions.

Variations from free-space calculations are due to combinations of refraction and diffraction ef-

fects, as well as occasional absorption conditions due to rain, snow or fog. Of these factors, all but diffraction vary with weather conditions and combine to form the diurnal and seasonal variations noted in point-to-point relay services.

Although considerable information is available in the literature to enable the engineer to predict with fair accuracy the signal strength under given con-

ditions of temperature and percentage of water vapor in the atmosphere, the usual practice is to allow certain empirical margins of safety or fading factors based on long-term observations of relay signals at various frequencies. Diffraction effects, unlike those associated with refraction, do not change with time and weather conditions but are determined by the choice of operating sites and the intervening terrain. As the course line clearance is readily determined, and frequently is a factor under the engineer's control, diffraction factors are of practical interest in most microwave relay installations.

Fresnel Zone

From diffraction theory, when a wave strikes an intervening object a spherical wavefront radiates from the edge of the obstruction. The field intensity at any point beyond the obstruction is thus dependent upon the vector sum of the direct and scattered wavefronts reaching the receiver. A Fresnel zone may be defined as a circular zone about the direct path at such a radius that the distance from a point on this circle to the receiving point has a path length that is some multiple of a half wavelength longer than the direct path. Hence, according to Fresnel's zone theory, all the even-numbered zones will send wavefronts to the receiver in opposite phase to all those from odd-numbered zones.

The effective field intensity at the receiver will rise and fall above and below the free-space value as the scattered waves alternately reinforce and cancel

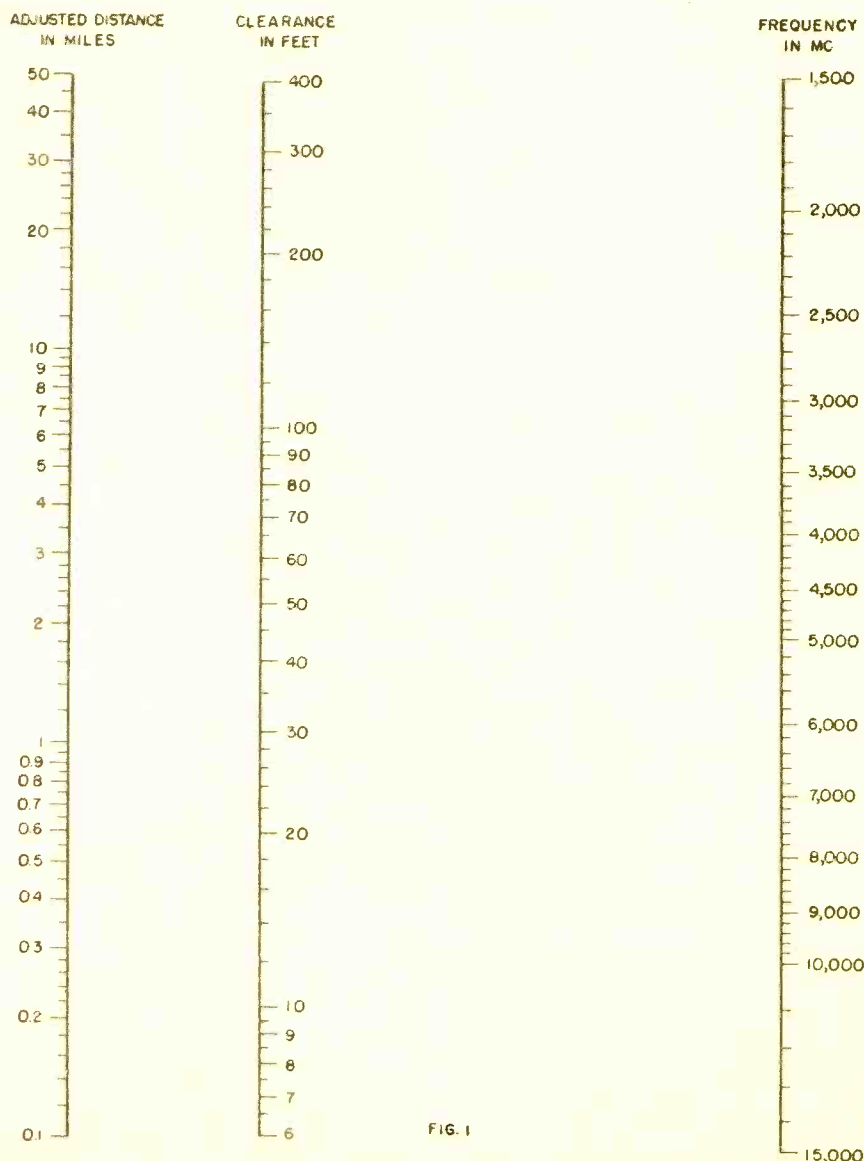


FIG. 1

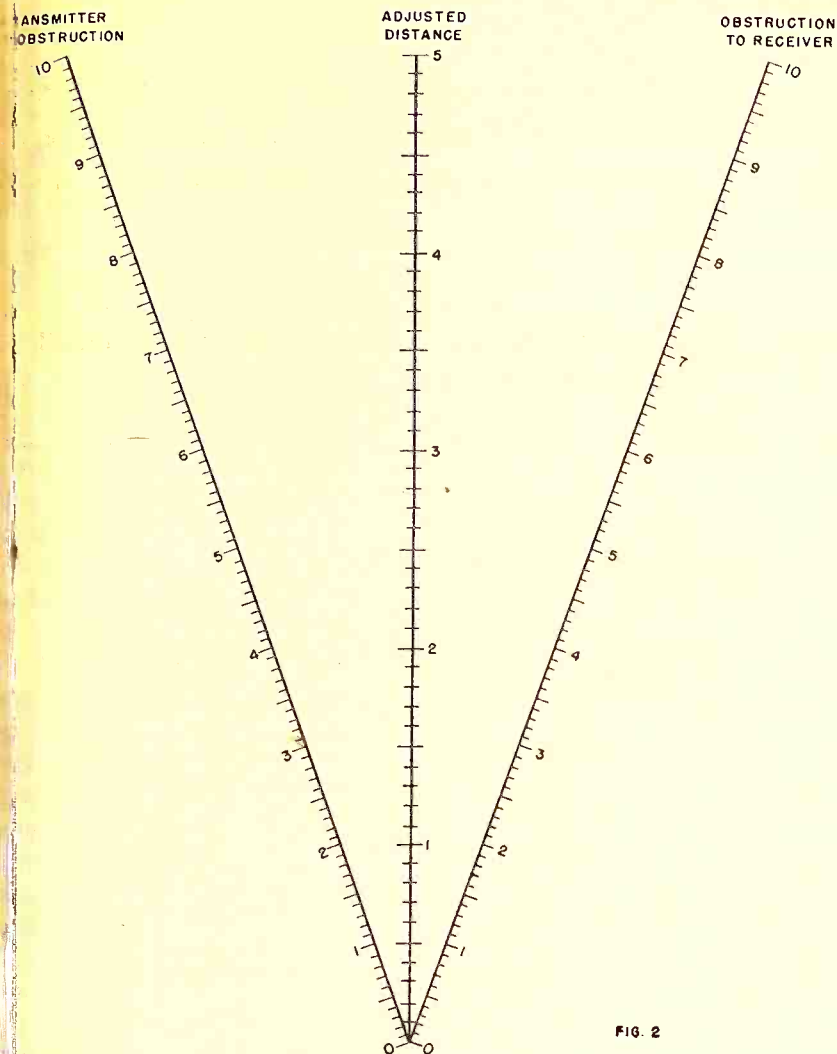


FIG. 2

direct wave. The energy reaching the receiver from a Fresnel zone is proportional to the area of that zone and inversely proportional to the distance from the transmitter to the receiver. As the width of the Fresnel zones making up the zones decreases rapidly as the radius of the Fresnel circles increases, the first Fresnel zone is the only one of practical importance in diffraction studies of radio waves. It has been stated² that a good path for microwave transmission is one with full first-Fresnel-zone clearance. With an optimum path the signal strength at the receiver (excluding meteorological effects) is somewhat better than free space values due to the fact that the phase shift along a line from the transmitting antenna to the top of the obstruction and from the top of the obstruction to the second antenna is

about one-half wavelength greater than the phase shift of the direct path and some signal reinforcement is obtained.

Figure 1 indicates directly the radius of the first Fresnel zone as a function of distance and operating frequency. The construction shown assumes a plane wave (that the spherical wave has expanded to the point where the front is flat over the diameter of the diffraction zones).

The results given by this chart hold true only if the obstruction is very close to one end of the course. For accurate results at any point along the path, the setting on the distance scale should be adjusted in terms of the results given by Fig. 2. This enables the retardation on both parts of the circuit to be taken into account. Figure 2 is a simple reciprocal nomogram and, as

the scales are linear, they may be multiplied by different decimal factors as required.

For example, to find the clearance required for a good microwave path, assume an operating frequency of 7,000 mc, a total course length of 11.5 miles and a principal obstruction 3 miles from the transmitter.

A line connecting 3 and 8.5 on the outside scales of Fig. 2 gives an adjusted distance of 2.2 miles. Connecting this point with 7,000 mc on Fig. 1 shows a required clearance of 40 feet at the point in question.

In addition to determining easily the requirements for a good optical path, these alignment charts permit making quantitative studies of signal intensity conditions under various diffraction conditions including grazing or even badly obstructed courses where the receiver may be in a shadow area.

The principal course obstruction should be plotted showing the projected area normal to the direct course between stations. The Fresnel zones should be drawn in as circles about the dot representing the course path, the radii being obtained from the charts. (While the nomograms show only the first zone radius, values for higher-order zones may be obtained by multiplying the indicated value by the square root of the number of the zone being considered.)

Having drawn the zone areas, with respect to the masking obstruction, the net field intensity may be obtained by integrating the area of the exposed zones. This can be accomplished graphically by means of the Cornu spiral.³ In this manner, the departure from free-space values may be accurately estimated for any course.

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COAXIAL-STUB FILTER

Undesired signals in a coaxial transmission line can be attenuated up to 30 db by connecting two stubs to the line, one for rejection and the other to correct the line impedance. Graphs give approximate stub lengths for any interfering frequency in range from 20 to 200 mc

By JAMES A. CRAIG

COAXIAL LINE stubs often can be effectively used in transmitter or receiver coaxial transmission lines to reduce or trap out specific spurious radiations or interfering signals. Stubs are well worth trying, since they are relatively inexpensive and can be depended upon to furnish up to 30-db additional attenuation to an undesired signal. Two stubs are used, one for rejection and one for correction, as shown in Fig. 1.

Receiver stubs are most easily fabricated from RG-58/U solid dielectric cable. Where stubs are to be used to suppress transmitter spurious radiations, a solid-dielectric cable should be used having the same power-handling capacity as is used between the transmitter and its antenna. The approximate length of the rejector stub for the undesired frequency can be determined from Fig. 2. A piece of

cable several inches longer than that called for should be connected into the transmission line as in Fig. 1, as close as practical to the transmitter or receiver. Use a pick or other sharp-pointed instrument to short-circuit the outer shield to the inner conductor at various points, starting from the outer end of the stub and working inward. Note at which point the short-circuit produces the greatest attenuation of the undesired signal and permanently short-circuit the cable there. Cut off the excess cable. This short-circuit may be best accomplished by collapsing the outer shield around the center conductor and soldering all around.

As Fig. 3 shows, the rejection

stub alone produces a certain amount of attenuation to the undesired signal. This is because it has been tuned to be a shorted half-wave section of line at the undesired frequency. As such, it presents close to zero impedance to this frequency at its point of connection to the main transmission line. However, at the desired frequency, the rejection stub will not be a shorted half-wave section of line and will therefore present either capacitive or inductive reactance to the line and thereby cause some degree of attenuation to the desired frequency. This effect can be overcome by adding a second stub called a correction stub, as shown in Fig. 1.

For various desired versus undesired frequency conditions, the length of the correction stub may vary from almost zero to one-half wavelength. The length of

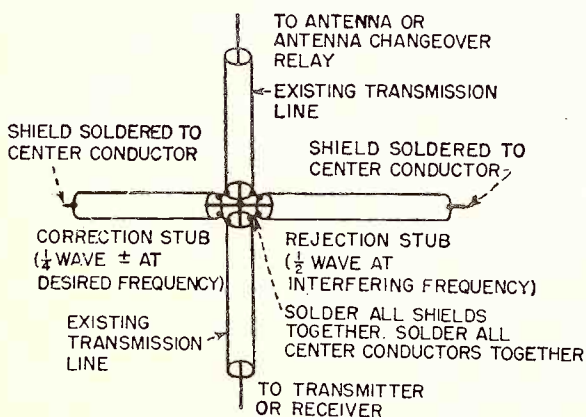


FIG. 1—Method of connecting stubs is same for both transmitting and receiving lines. Put stubs as close as possible to transmitter or receiver

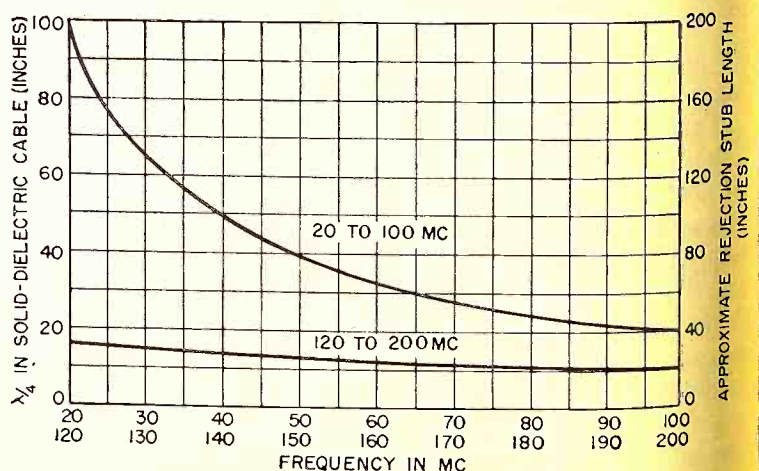


FIG. 2—Correction and rejection stub lengths. Use left-hand scale in connection with Fig. 4 to determine correction stub length, since this is longer or shorter than a quarter-wavelength at some frequencies

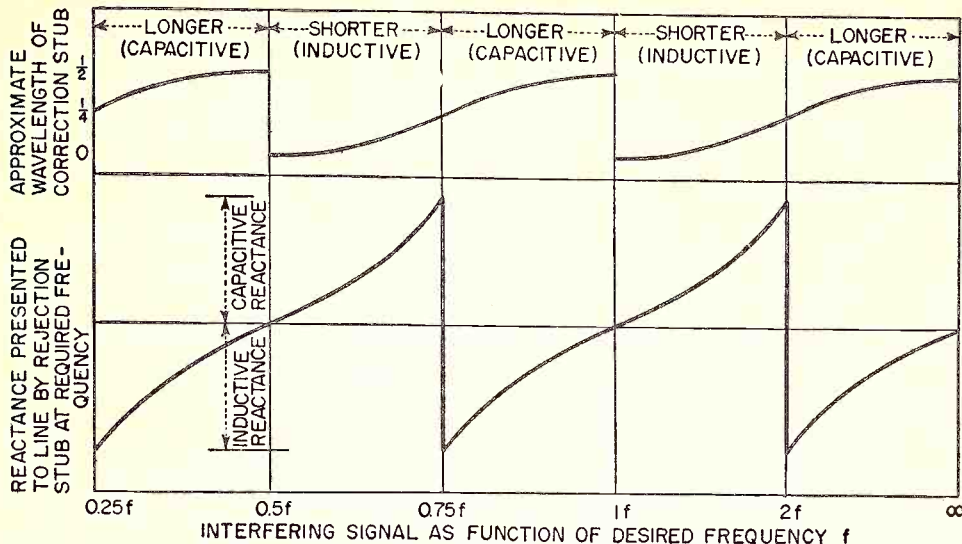
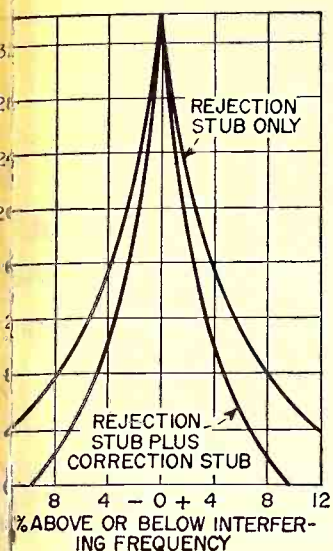


FIG. 4—Curves showing line characteristics with stubs in place, as function of ratio of interfering signal to desired signal

Attenuation characteristics of stubs

quarter wave in solid dielectric cable is also plotted in Fig. 2 to show that the correction will be some value between a definite lower limit and a definite upper limit. In this case, the desired frequency should be used in determining the length of the correction stub. This stub is tuned permanently short-circuited as in the case of the rejection stub, except that the tuning is done to produce the least attenuation of the desired signal. If the correction stub were to be made exactly one-quarter wave long at the desired frequency, it would present infinite reactance (neither capacitive or inductive) to the desired signal. If being made shorter than a quarter wave it presents progressively less inductive reactance.

While being made somewhat longer than a quarter wave it presents progressively less capacitive reactance to the line. The amount of reactance in either case depends upon how much longer or shorter than a quarter wave the correction stub is made. This length is automatically arrived at in the tuning procedure given above.

Figure 4 shows whether the correction stub will be longer or shorter than the quarter-wave length shown in Fig. 2. To use Figure 4, determine what relation-

ship the interfering frequency bears to the desired frequency. As an example, if the desired frequency f is 40 mc and the interfering signal is 25 mc, the interfering frequency would be between $0.5f$ and $0.75f$. The lower curve shows that in this range the reactance presented to the line by the rejection stub is capacitive, and the upper curve shows that the correction stub should present inductive reactance and hence be shorter than a quarter wave, or shorter than the value called for on Fig. 2. The correction stub is thus utilized to balance out the reactance presented to the line by the rejection stub at the desired frequency.

Correction Stub Details

It is not necessary or desirable to show how many inches shorter or longer than a quarter wave the correction stub should be in chart form, since the precise length will be automatically arrived at as the stub is short-circuited in the tuning process. However, the upper curves in Fig. 4 do give the approximate length of the correction stub in terms of wavelength. In the example given above, these curves show that the corrector stub will be less than $\frac{1}{4}$ wave long. In this case, it is advisable to start with

a quarter-wave length of cable and short it at various points in the vicinity of an eighth wave to find the exact point.

Had Fig. 4 indicated the need for a capacitive correction stub (greater than a quarter wave and less than a half wave), it would be advisable to start with a half-wave length of cable and probe through the predicted point. Figure 4 is to be used chiefly as an aid in predicting the length of the correction stub and to help in visualizing the line conditions with the stubs in place.

A word of caution is advisable in a few specific cases. If the interfering frequency is approximately $\frac{1}{2}$, $\frac{1}{4}$ or $\frac{3}{4}$ of the desired frequency, stubs cannot be used. In these cases, the rejection stub will prove to be a full wavelength or multiple of a full wavelength at the desired frequency and will therefore present high attenuation to the desired frequency as well as to the interfering frequency. On the other hand, if the interfering frequency is exactly twice the desired frequency a correction stub will not be necessary since the one-half wave rejection stub will be an exact quarter wave at the desired frequency and will present infinite impedance to the desired frequency.

CHOOSING PENTODES FOR BROAD-BAND AMPLIFIERS

Gain-bandwidth products for pentodes are easy to calculate individually, but a graphic comparison of these broad-band amplifier-tube figures of merit yields a wealth of interesting and useful information. Such a comparison is shown in chart form below

THERE ARE MANY tubes now available for use in broad-band amplifiers. Pentodes are generally preferred to other types because of their relatively low grid-to-plate capacitance values. The chart below shows at a glance the relative suitability of 100 typical pentodes for use in broad-band amplifier circuits.

The important features of a pentode in this application are its transconductance or g_m , and the total capacitance to ground C , which is equal to the input plus the output capacitance. The plate resistance is much larger than the load resistance R and is usually neglected.

At normal frequencies the gain of the tube is $g_m R$. At high frequencies, if no compensation is used, the gain falls to 70 percent at the frequency where the re-

By JOHN R. WHYTE

actance of C is equal to R . If this frequency

$$f = \frac{1}{2\pi RC}$$

is taken as the bandwidth, then

$$\text{gain} \times \text{bandwidth} = \frac{g_m}{2\pi C}$$

and depends on the tube characteristics rather than on the external circuit. More complicated coupling networks will extend the bandwidth, but the gain-bandwidth product will still depend on the ratio of g_m to C .

Transconductance and total capacitance are used as coordinates. Different envelope styles are shown by different symbols. Using logarithmic scales, the contours of constant gain-band-

width product are lines sloping upwards at 45 degrees. The most desirable tube for this service is towards the lower right corner of the chart.

One use of this chart is to indicate tubes that are electrically similar, such as the 6AU6 and 6BH6.

The chart also shows that an improved tube can be obtained either by increasing the g_m , as shown by types 6AG5 and 6BC5, or by decreasing the capacitance, as shown by types 6AG5 and 6AK5.

Other similarities and differences are shown by tubes on the same diagonal line. For example, types 6AK5, 6CB6 and 6AH6 have the same gain-bandwidth product, with different values of transconductance and capacitance.

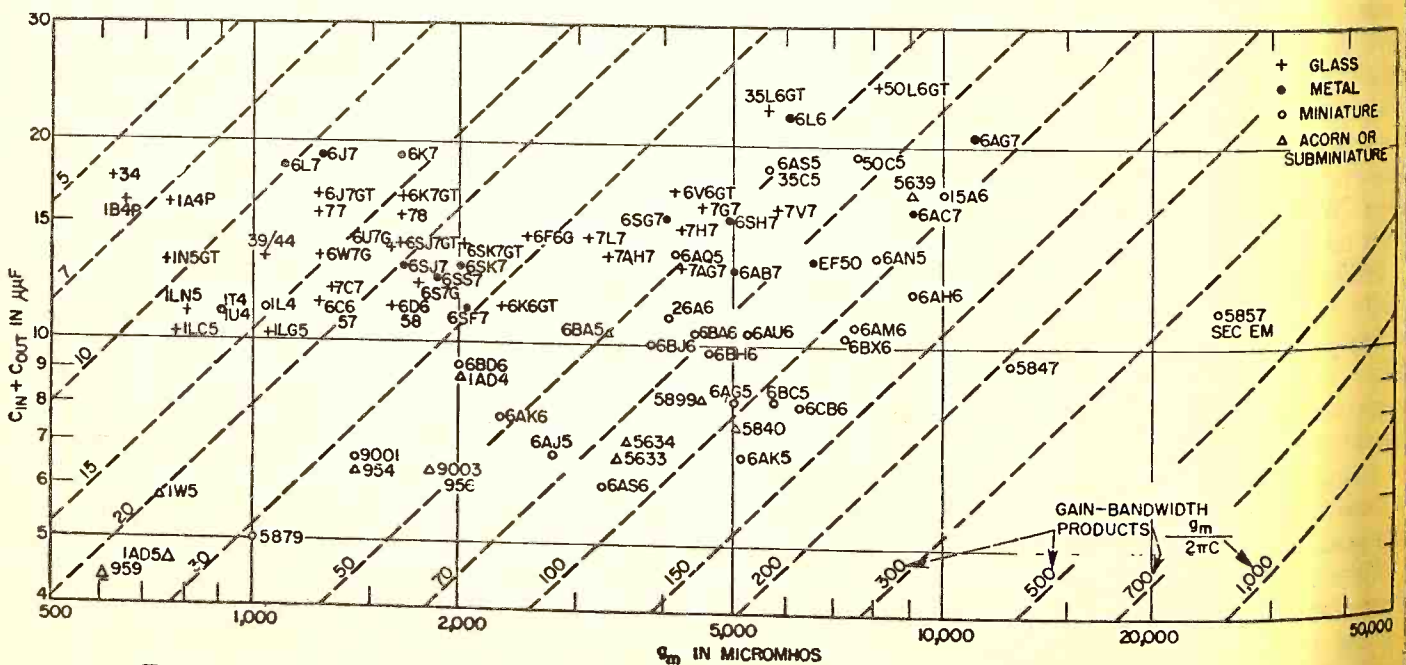


Chart enables designer to compare broad-band amplifier performance of various pentodes at a glance

SERIES-PEAKING NETWORK DESIGN

Nomograph permits rapid determination of series inductance and load resistance values for given cutoff frequency and shunt capacitance, and comparison of different circuit parameter combinations which give equal results

By JOSEPH F. SODARO

SERIES-INDUCTANCE peaking network compensation has the advantages over shunt peaking of greater amplification, smaller phase-angle error, and rapid attenuation beyond the cutoff frequency.

The basic series-compensated circuit is shown in Fig. 1. Each capacitance is a summation of the tube socket, wiring and associated tube interelectrode capacitance. The value of L is computed from

$$L = \frac{1}{8\pi^2 f^2 C'} \text{ henrys}$$

in which f is the cutoff frequency.

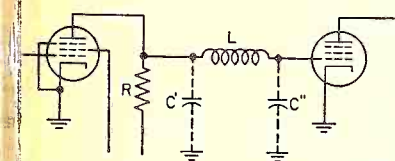


Fig. 1—Basic series-peaking network

The value of R is calculated from

$$R = \frac{1}{2\pi f C' \sqrt{2 \frac{C''}{C'}}} \text{ ohms}$$

If the ratio C''/C' is made equal to 2, the most satisfactory overall performance is obtained.¹ The Q of the series inductor should be 20 or more.

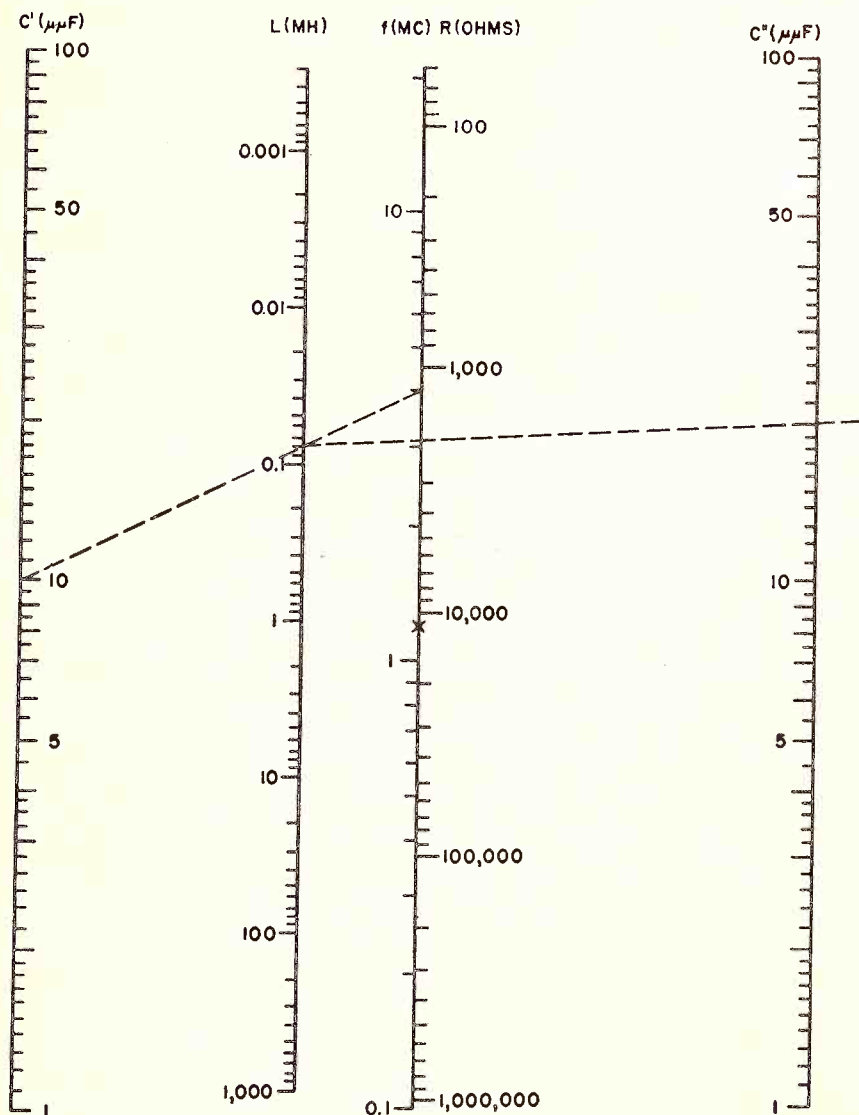
The nomograph is used by constructing a straight line from f

to the measured or calculated C' . The intersection of this line with the L scale shows the required inductance and provides a turning point from which a straight line is drawn to the measured or calculated C'' . The intersection of this line with the R scale shows the required load.

In the example $C' = 10 \mu\mu\text{f}$, $C'' = 20 \mu\mu\text{f}$ and $f = 4 \text{ mc}$. The series-peaking inductance L becomes 0.08 mh and R is 2,000 ohms.

REFERENCE

(1) K. R. Sturley, "Radio Receiver Design", Part II, p 427, Chapman and Hall, 1945.



TELEVISION I-F COIL DESIGN

Nomograph gives number of close-wound turns required to get desired inductance in range of values of interest to designers of coils for television, f-m and radar i-f transformers, eliminating considerable computational labor

By
JEAN HOWARD FELKER

THIS nomograph is based on a modification of H. A. Wheeler's inductance formula¹

$$L = \frac{r^2 n^2}{9r + 10l} \text{ microhenrys} \quad (1)$$

where r is the radius of the coil in inches, l its length in inches, and n the number of turns. In close-wound coils, l is a function of n . Substitution of nd , where d is the diameter of the wire in inches, for l in Eq. 1 gives an equation which can be solved for n to give

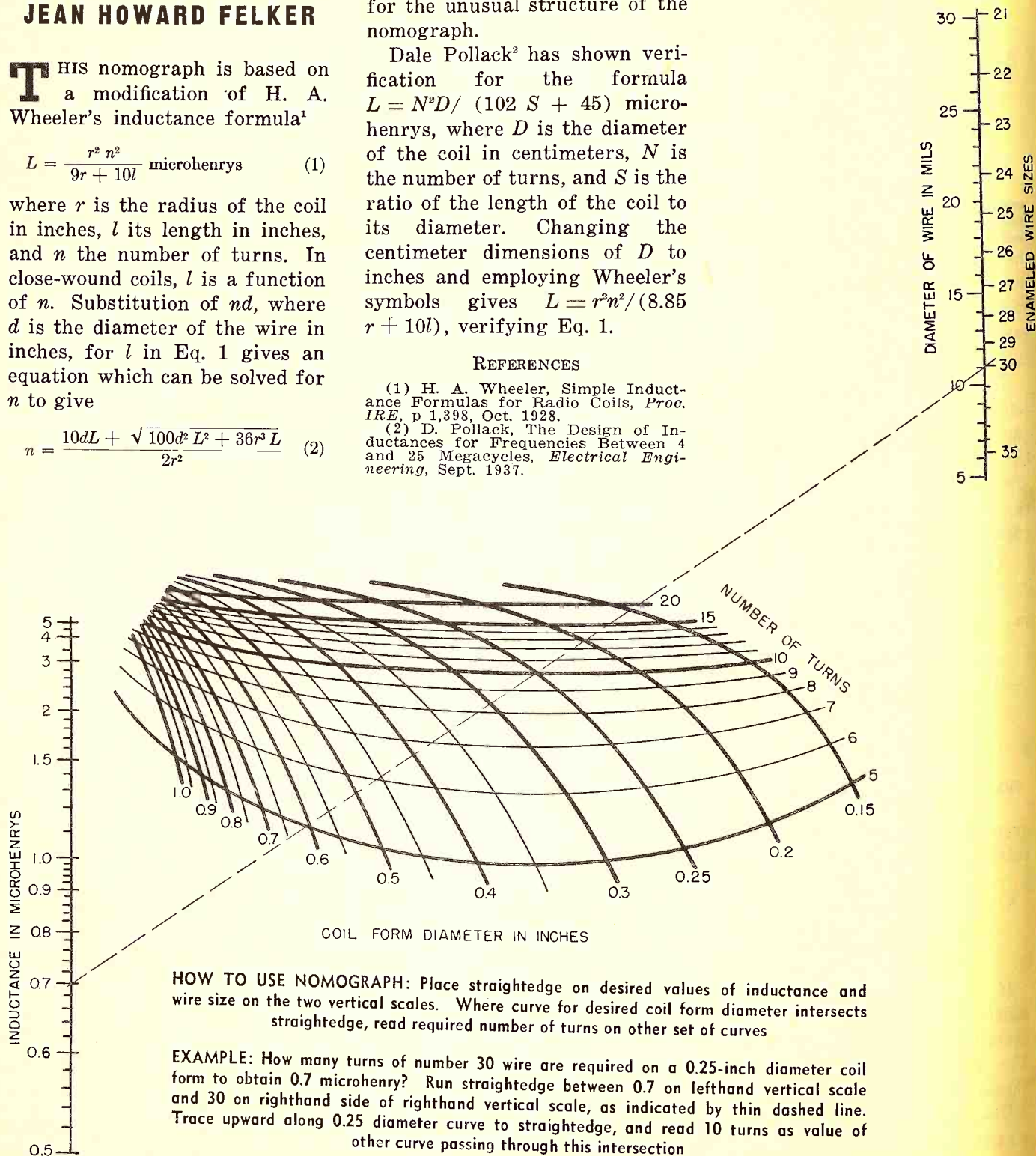
$$n = \frac{10dL + \sqrt{100d^2 L^2 + 36r^3 L}}{2r^2} \quad (2)$$

The complexity of Eq. 2 accounts for the unusual structure of the nomograph.

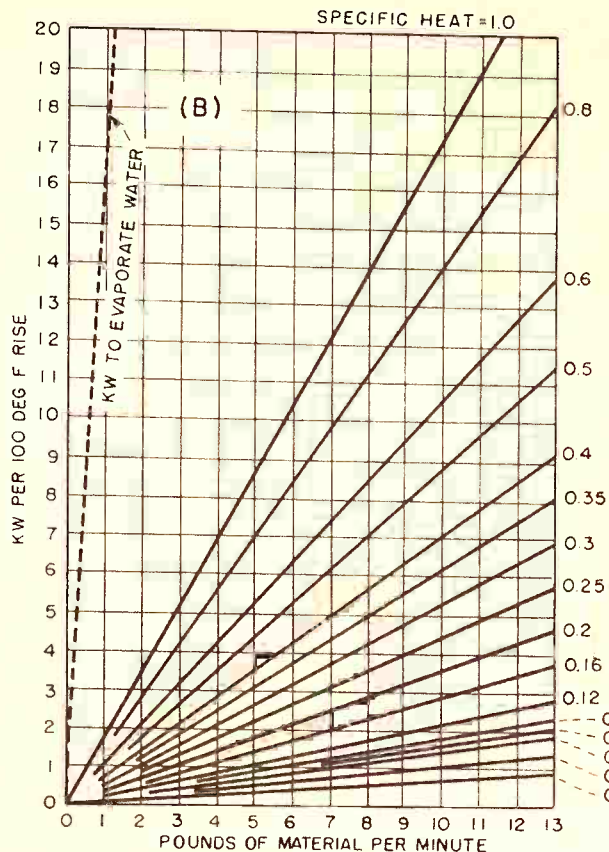
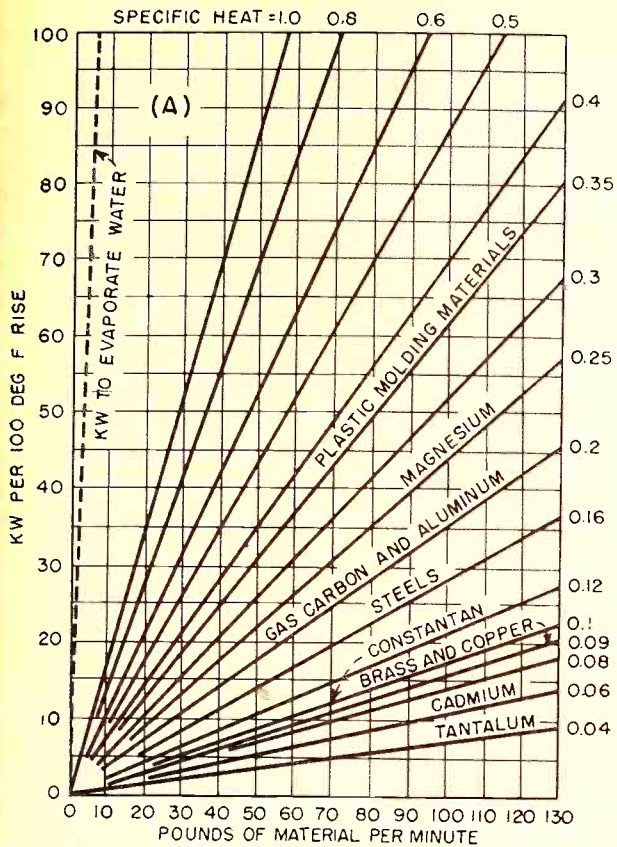
Dale Pollack² has shown verification for the formula $L = N^2 D / (102 S + 45)$ microhenrys, where D is the diameter of the coil in centimeters, N is the number of turns, and S is the ratio of the length of the coil to its diameter. Changing the centimeter dimensions of D to inches and employing Wheeler's symbols gives $L = r^2 n^2 / (8.85 r + 10l)$, verifying Eq. 1.

REFERENCES

- (1) H. A. Wheeler, Simple Inductance Formulas for Radio Coils, *Proc. IRE*, p 1,398, Oct. 1928.
- (2) D. Pollack, The Design of Inductances for Frequencies Between 4 and 25 Megacycles, *Electrical Engineering*, Sept. 1937.



ELECTRONIC HEATING GRAPHS



Thermal power versus heating rate for materials of various specific heats. The two graphs are identical except that the one at the right is used for more accurate results with small quantities

Curves give power needed to attain desired temperature rise at given rate for materials having specific heats ranging from 0.04 to 1.0, when using either induction or dielectric heating. Separate curves cover evaporation of water

By A. P. BOCK

evaporation curve is a plot of $\text{kw} = 17.05 \text{ lb per min water evaporated}$.

Examples

Suppose it is desired to heat 50 pounds of steel per minute from 50 F to 1,350 F. Using a specific heat of 0.16, a value of 14 kw per 100-deg rise is obtained from graph A. Then for 1,300 deg rise, 13×14 or 182 kw of thermal power is required.

In another case, it may be desired to heat 10 lb per min (dry weight) of preforms, such as general-purpose molding compound, from 70 F to 270 F. Suppose this material contains

2-percent moisture, all of which will be evaporated by the time 270 F is reached. Using a specific heat of 0.35, a value of 6.1 kw per 100-deg rise is obtained from graph B. Then for 200-deg rise, 2×6.1 or 12.2 kw of thermal power is required to heat the dry material.

Two more factors of required power enter in owing to the moisture. In raising 0.2 lb of water per min from 70 F to 212 F or 142-deg rise, and using a specific heat of 1.0 for water, we have 0.35 kw per 100-deg rise or 0.5 kw for 142-deg rise. In evaporating 0.2 lb of water per min, the dashed-line curve of graph B indicates that 3.4 kw is needed. The sum of these products, then, totals 16.1 kw.

DESIGN OF R-F HEAT-TREATMENT

By **EUGENE MITTELMAN**

THE principal difficulty in the design of generators using the capacitive field method for r-f heat treatment is due to the characteristic potential distribution in the output circuit of such generators. The actual r-f potential across the object itself is a small fraction of the total high-frequency voltage across the electrodes. The potential distribution is a rather com-

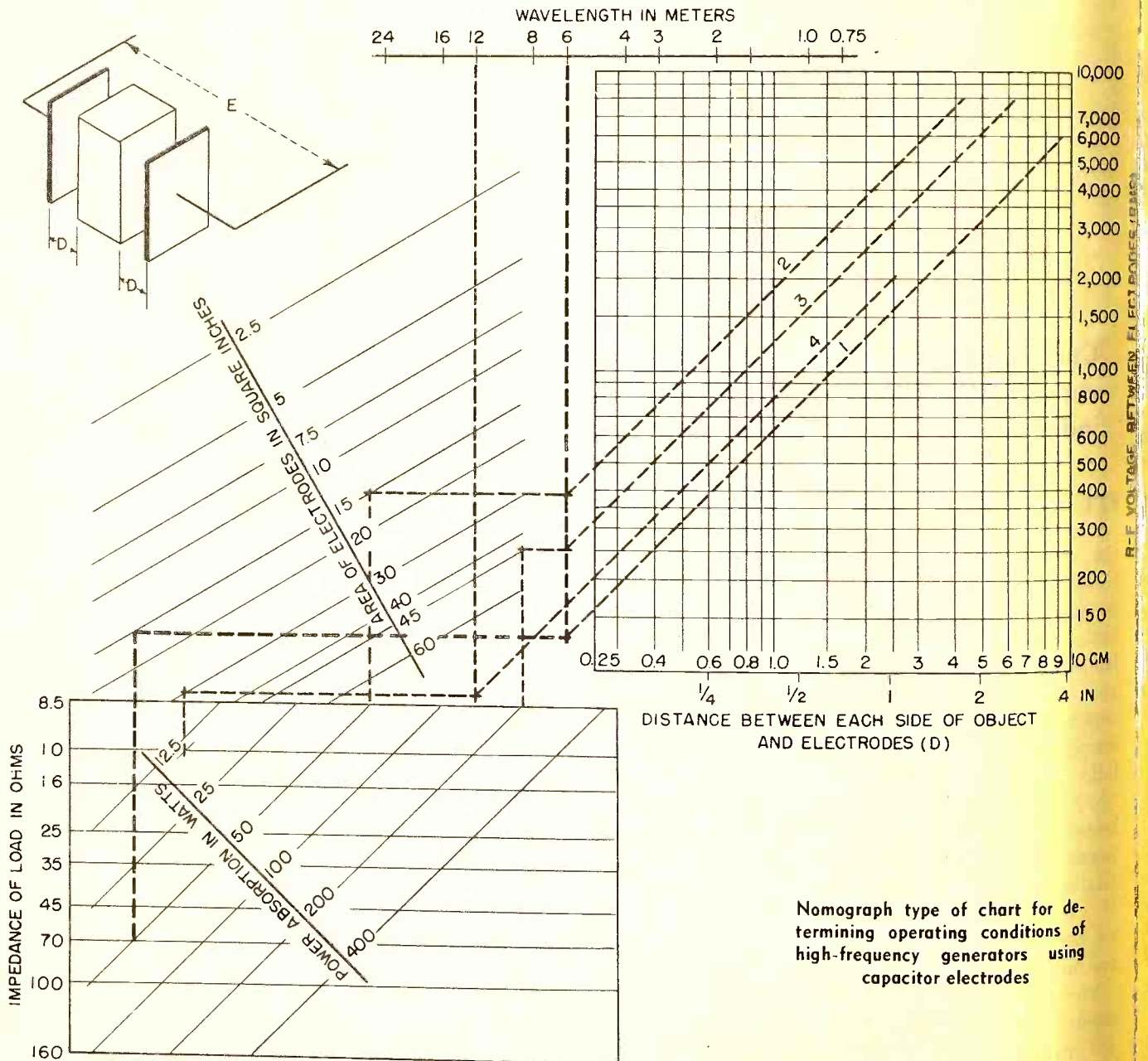
plicated function of a great number of variables including the wavelength, the capacitance between the electrodes and the object (which in turn is a function of the size of the electrodes, their distance from the object and the dielectric constant of the space between the electrodes), and the conductivity and dielectric constant of the object itself.

In general, both in the industrial and in the electromedical fields of application, the load impedance represented by the ob-

ject is small compared to the reactances of the coupling capacitances between object and electrodes, hence the necessity for an excessively high-frequency voltage across the electrodes for the achievement of certain required power absorption by the object.

Chart Design

The chart is designed to give the high-frequency voltage across the electrodes as a function of the distance D between



Nomograph type of chart for determining operating conditions of high-frequency generators using capacitor electrodes

Chart gives directly the effect of changes in electrode spacing and other operating parameters. Many heat-treatment generators using capacitive electrodes do not produce expected power output because of improper coupling to the load

ject and electrodes for any arbitrary values of the other variables as parameters. The chart may also be used to determine the power designated in the chart when the area of the electrodes and the load impedance are known. It shows up the limitations of the capacitor field method especially when large spacing is required. On the other hand it demonstrates that under favorable conditions considerable power absorption may be obtained even with relatively low voltages of the high-frequency field across the electrodes. Another fact is of special importance in the design of some all-purpose generators. At the maximum available frequency voltage in the circuit of an oscillator is not 0.9 the plate voltage or 1.8 times of the push-pull type generators, the chart will prove helpful in the proper choice of oscillator tubes.

Use of Chart

Select the lines of desired power absorption and load impedance at the lower left corner of the chart. From their intersection erect a vertical line and extend upward to the 30-square-inch line corresponding to the electrode area. From this intersection project horizontally to an intersection with a vertical line drawn through the wavelength on the wavelength scale. Through this last intersection point, a 45-degree line extending into the grid of logarithmic scales will give the potential as a function of the electrode spacing. For dielectrics between object and electrodes having constants greater

than unity, the readings on the horizontal scale, giving the distances between object and electrodes, must be divided by the dielectric constant.

Examples of Use of Chart

The correct use of the chart can be best explained by solving several examples.

(1) Given a generator with wavelength of 6 meters and a pair of electrodes 15 square inches in area, determine the voltage across the electrodes for a 70-ohm load to absorb 50 watts, provided the spacing between object and electrodes is one inch on both sides. From line 1 corresponding to this case we read off 1,600 volts rms. The voltages for other spacings may be taken from the same line.

(2) Given the same wavelength and the same geometrical conditions, a load impedance of 8.5 ohms, and a desired power absorption of 50 watts, find the r-f voltage across the electrodes. From line 2 we find the voltage must be increased to 3,700 volts rms.

(3) The power absorption can be increased greatly, even with less r-f voltage across the electrodes, if the area of the electrodes is increased. Line 3 corresponds to a 6-meter generator yielding 200 watts power absorption in a 8.5-ohm load between two electrodes whose area is 45 square inches.

(4) With a 12-meter generator the maximum available r-f voltage, with electrodes whose area is 30 square inches, shall be 2,000 volts rms. What power absorption can be expected if a load of 10 ohms equivalent im-

pedance is placed between the electrodes separated by 2.5-cm (1-inch) air spacing on each side of the electrodes? We find the answer by drawing a straight line at 45 degrees through the point corresponding to 2,000 volts and 2.5 cm (1 inch) on the graph (line 4) until it intersects the vertical 12-meter line. From here draw a horizontal to the 30-square-inch line and project down to the 10-ohm line. The power absorption will not exceed about 14 watts.

The physical arrangement of the chart is such that any of the variables can be taken as the independent factors merely by entering the chart at the right place. This feature is of particular advantage when the exact operating conditions are not known, and when several factors may be varied to obtain the desired power absorption.

Thus, for example, increasing the area of the electrodes increases the power absorption (all other factors remaining constant) in proportion to the increase in electrode area. Likewise, by halving the wavelength, the power absorption is doubled, if this is the only change in operation. Doubling the distance between electrodes and object means that the voltage must be doubled to maintain the same power absorption. Conversely, for a given impedance and power absorption, the voltage of the generator must be doubled if the spacing, D , is doubled.

As a result of many actual measurements on practical generators, it is found that the chart gives results in good agreement with practice.

NOMOGRAPH AIDS

FILTER DESIGNERS

Convenient nomograph aids design of power-supply filters. Percent ripple at output can be determined for various filters, including choke and capacitor input L-C filters and R-C types. Nomograph applies equally to full-wave and half-wave power supplies

By JOHN L. GLASER

PERCENTAGE RIPPLE for filters used with single-phase rectifiers operating from 60-cps sources can be easily and accurately determined with the accompanying nomograph.

Ripple factor is defined as the ratio of rms value of all a-c components of voltage to the d-c or average value of voltage. Generally, more than one frequency component is present in ripple, but a good approximation is obtained by considering only the lowest frequency component, especially when more than one filter section is employed.

The ripple factor of the voltage across the input of a capacitor-input filter is approximately

$$\frac{1}{\pi f R_L C_1}$$

where R_L is the d-c load resistance, C_1 the input capacitor and f the fundamental frequency.

On the chart, percentage ripple across the first capacitor is found by drawing a line connecting rectifier output voltage on scale *A* with rectifier output current on *B*. This line intersects *C* at the value of R_L . A line connecting R_L with the value of the input capacitor on *F* gives percentage ripple on *E*.

A second filter section consisting of a series inductance L_2 , followed by a shunt capacitance C_2 , reduces percentage ripple by the factor

$$\frac{1}{(2\pi f)^2 L_2 C_2 - 1}$$

where again f is the fundamental frequency of ripple. Within the range of L_2 and C_2 covered by the chart, $(2\pi f)^2 L_2 C_2$ is considerably greater than 1 so the ripple reduction factor is approximately

$$\frac{1}{(2\pi f)^2 L_2 C_2}$$

Ripple reduction factor of the second filter section is found on scale *I* by drawing a line connecting the value of L_2 on *J* with the value of C_2 on *H*. Ripple appearing across C_2 is obtained by multiplying the ripple across C_1 by the ripple reduction factor. This is accomplished by connecting these values on scales *E* and *I* with a straight line, giving the answer on *G*.

R-C Filters

The chart also provides for computation of ripple reduction resulting from a second filter section consisting of a series resistance followed by a shunt capacitance. In this case filter resistance is entered on *K* in place of the inductance which was entered on *J* as described above. The relation here states that the ripple reduction factor of the R-C filter is approximately

$$\frac{1}{2\pi f C_2 R}$$

Ripple across C_1 is multiplied by this factor.

These procedures apply to either half-wave or full-wave rectifiers using scale markings

labelled half-wave or full-wave. The two sets of markings account for different fundamental ripple frequencies.

Usually choke-input filters are designed so that the input choke has greater than critical inductance. Critical inductance is the minimum inductance that will provide uninterrupted current flow, and for 60-cps full-wave rectifiers, is equal to $R_L/1,132$. If the input choke has greater than critical inductance, the fundamental component of ripple at the rectifier output has an rms value 0.471 times the d-c component of rectifier output voltage. Thus percentage ripple at this point is approximately 47.1 percent.

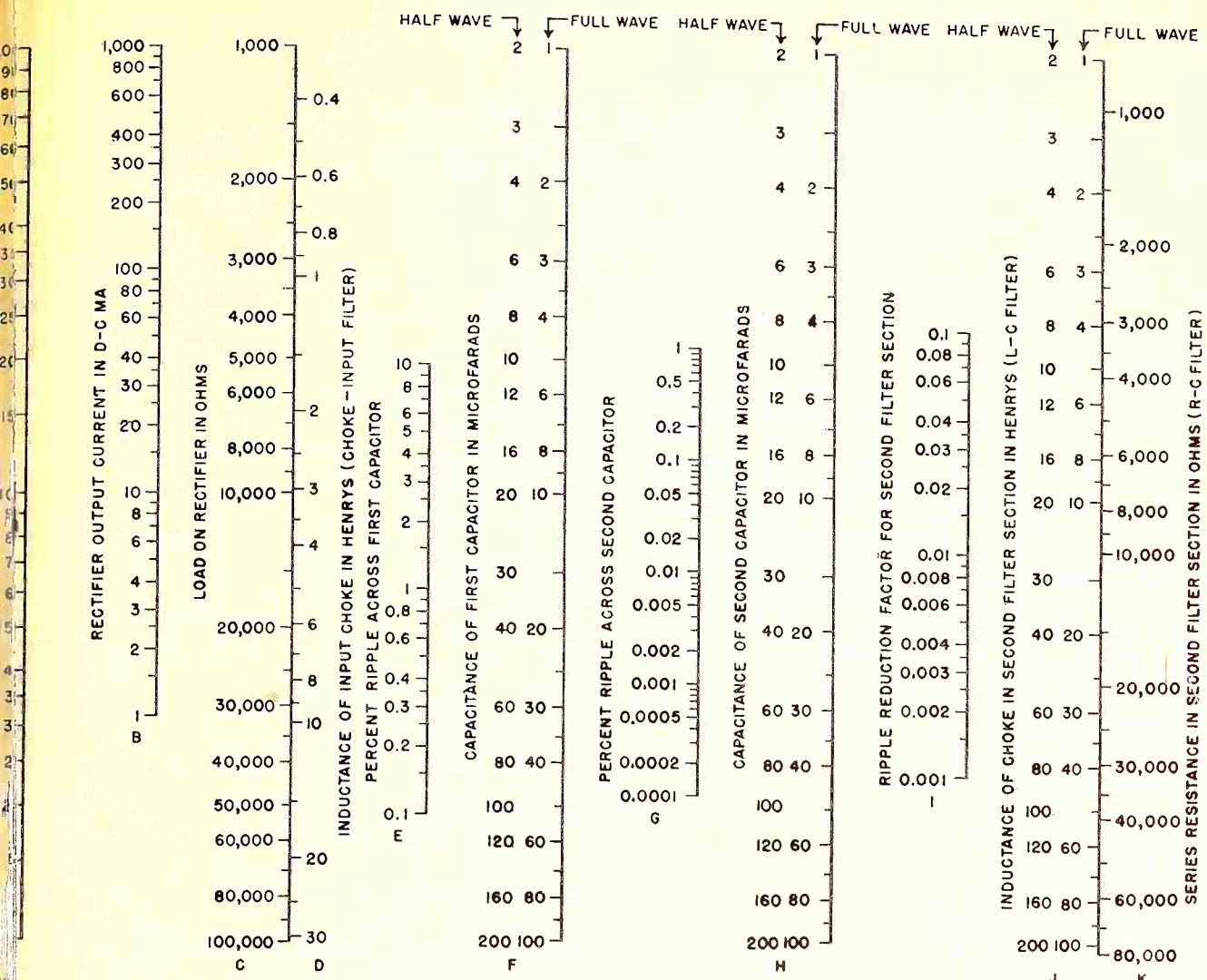
Input choke L_1 and the shunt capacitor C_1 reduce this ripple by a factor $1/(2\pi f)^2 L_1 C_1$ giving the percentage ripple across C_1

$$\frac{47.1}{(2\pi f)^2 L_1 C_1}$$

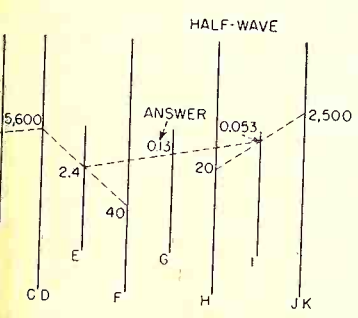
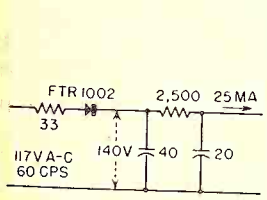
This is found on the chart by drawing a line between L_1 on scale *D* and the C_1 on *F*. Percentage ripple across C_1 is found at the intersection of this line on *E*. Further ripple reduction resulting from an additional L-C or R-C section is found in the manner described for the capacitor-input filter.

Examples illustrating use of the chart are given in Fig. 1, 2 and 3.

These show analysis of performance of proposed filters with specific values of circuit components. Any component value could have been considered an



Basic filter design equations are combined in convenient form in this single nomograph



Solution for half-wave selenium rectifier supply using an R-C filter

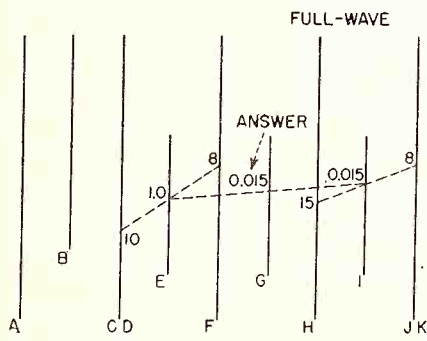
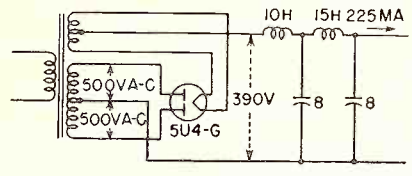


FIG. 2—Full-wave power supply using an L-C filter with capacitor input

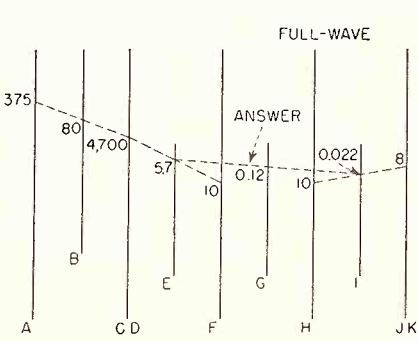
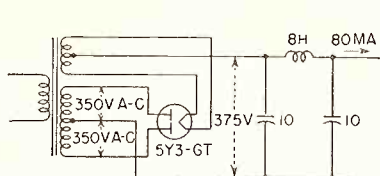


FIG. 3—Solution for full-wave supply using a choke-input filter

own to be determined for defined filter performance. However, design procedure is usually to analyze various possible filter circuits made up of available components. The chart

provides a means for estimating the ripple for various filter circuits.

The chart is applicable only where power-line frequency is 60 cps. To predict the perform-

ance of a filter at some other frequency, f' , the values of capacitances and inductances should be multiplied by the factor $f'/60$ before entering these values on the chart.

SERVO POWER CALCULATIONS

Chart gives required shaft output power in watts for any combination of speed and torque of subfractional motors in tube-driven servo systems. Alternative slide rule method of finding power is also given

SERVO SYSTEM calculations must of necessity start with motor shaft output power to perform the specified work in a specified time. This involves the speed of shaft rotation and the torque required to perform the work. Since motors used in servo systems are usually sub-

By **OSCAR E. CARLSON**

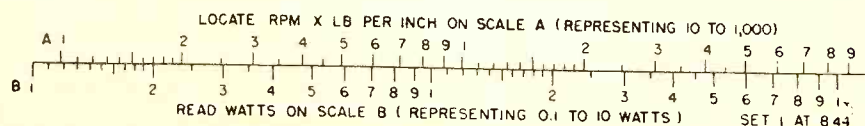
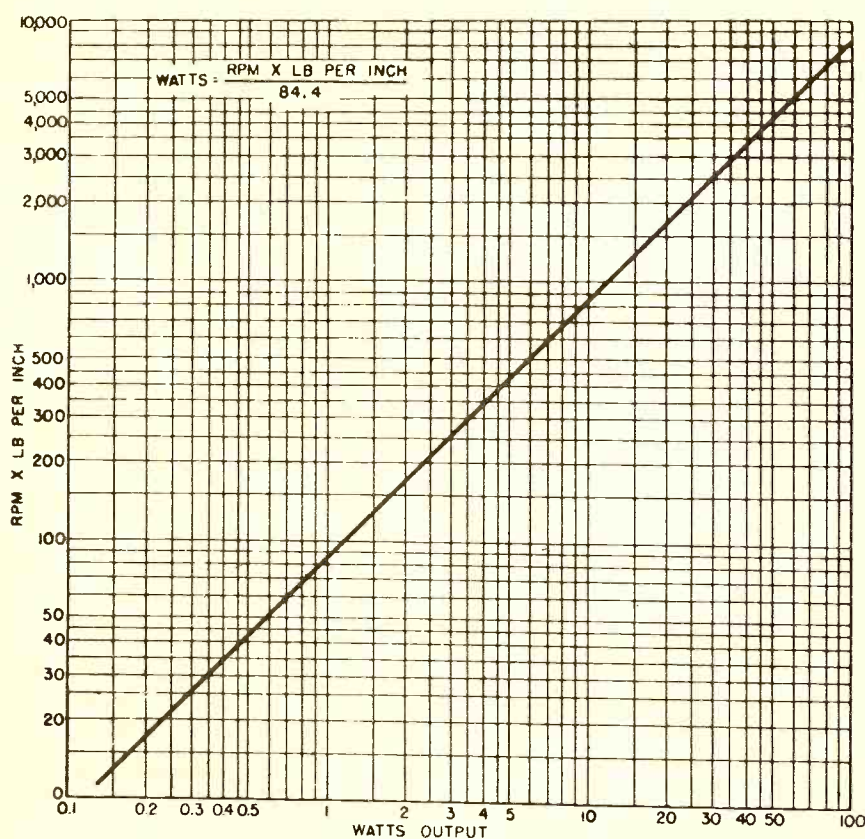
fractional sizes, the horsepower unit is clumsy and awkward for expressing output power. Watts of output has become a common

means of expressing such power requirements.

The conversion of speed and torque requirements to a wattage equivalent is a simple arithmetical computation, but its very simplicity lends itself to even more simplified computation. The equations are

$$\text{Horsepower} = \frac{\text{rpm} \times \text{lb per in.}}{63,000}$$

$$\begin{aligned} \text{Watts} &= \frac{746 \times \text{rpm} \times \text{lb per in.}}{63,000} \\ &= \frac{\text{rpm} \times \text{lb per in.}}{84.4} \end{aligned}$$



This last equation may readily be laid out on a loglog chart so that the rpm x lb per in. factor may be translated into watts quite simply. The accompanying chart does this.

As with most loglog coordinate charts, a slide rule may be utilized for these calculations without using the slider. Set the righthand 1 of the B scale under 8.44 in the righthand log cycle of the A scale, as shown below the chart. With the A scale now representing rpm x lb per inch from 10 to 1,000, the wattage may be read directly under that product on the B scale, with that scale reading from 0.1 to 10 watts. A multiplier of 10 or 100 may of course be used to make calculations up to 1,000 watts, if so required.

R-F COUPLING NOMOGRAPH

Gives coefficient of inductive coupling of an r-f transformer directly from Q-meter measurements. Procedure permits correcting for effects of distributed capacitance

By **RAYMOND E. LAFFERTY**

WHEN MEASURING the coefficient of inductive coupling of an r-f transformer with Q-meter, one winding of the transformer is connected to the inductor terminals of the Q-meter and the capacitance of the Q-meter circuit is tuned to resonance with the second winding open to give C_1 , and shorted to give C_2 . Then

$$k = \sqrt{1 - (C_1/C_2)} \quad (1)$$

Equation 1 also neglects the effect of distributed capacitance in either or both windings, and

is valid only if the Q's of both windings are greater than 10. Where primary distributed capacitance C_p and secondary distributed capacitance C_s are both present to a significant degree,

$$k = \sqrt{1 - U} \quad (2)$$

$$\text{where } U = \frac{1}{(1 - \gamma^2) \left(\frac{C_2 + C_p}{C_1 + C_p} \right) + \gamma^2}$$

$$\begin{aligned} \gamma^2 &= (f/f_0)^2 \\ f &= \text{Q meter frequency} \\ f_0 &= \text{self-resonant frequency of secondary, or } 1/2\pi \sqrt{L_s C_s} \end{aligned}$$

Where C_p is significant and C_s is negligible ($\gamma^2 \cong 0$);

$$k = \sqrt{1 - V} \quad (3)$$

where $V = (C_1 + C_p)/(C_2 + C_p)$

Where C_s is significant and C_p is negligible ($C_p < 5$ percent of C_1);

$$k = \sqrt{1 - W} \quad (4)$$

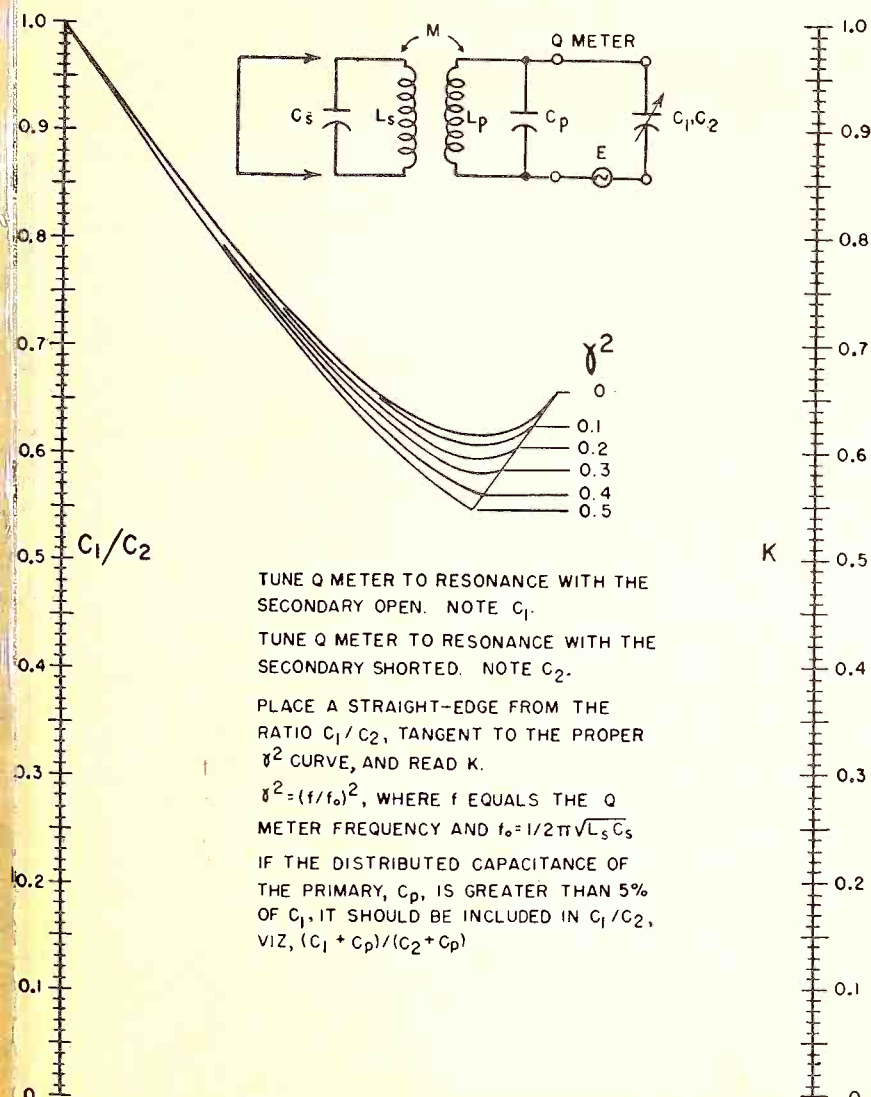
$$\text{where } W = \frac{1}{(1 - \gamma^2) \frac{C_2}{C_1} + \gamma^2}$$

The nomograph is used by extending a straight-edge from C_1/C_2 , tangent to the correct γ^2 curve, and reading its intersection with the scale for k . If C_s is small enough to be neglected, γ^2 is approximately zero and the zero curve should be used.

If both windings of the transformer have appreciable capacitance, C_p and f_0 should be measured before the coils are inductively coupled.

Example 1. The Q-meter tunes to 460 kc with 210 $\mu\mu\text{f}$ of capacitance when one winding of an r-f transformer is connected to the inductor terminals and the other winding is left open. When the second winding is shorted the Q-meter capacitor must be increased to 375 $\mu\mu\text{f}$ to maintain resonance at 460 kc. The self-resonant frequency of the secondary is found to be 840 kc, and C_p can be considered negligible. From this, $C_1/C_2 = 0.56$ and $\gamma^2 = 0.3$. Using the nomograph, k is 0.6.

Example 2. $C_1 = 95 \mu\mu\text{f}$, $C_2 = 116 \mu\mu\text{f}$, $C_p = 15 \mu\mu\text{f}$ and C_s is negligible (hence $\gamma^2 \cong 0$). From these data, $(C_1 + C_p)/(C_2 + C_p) = 0.84$ and the nomograph shows k to be 0.4.



VECTOR COMPUTATIONS

Aids in transforming rectangular to polar coordinates, and for determining the reciprocal of a complex number. Number of operations involved is much less than with alternative sliderule methods, particularly when working with multimesh networks. Range of charts is easily extended

By PAUL W. KLIPSCH

THE practical use of complex quantities in electrical engineering is almost as old as the profession itself. The charts presented here aid in performing two important vector operations, Fig. 1 transforming an equation in rectangular coordinates, $z = x + jy$, to its polar form, a / θ , and vice versa. Figure 2 is useful in determining the reciprocal of a complex number, that is in solving the equation

$$x + jy = (a + jb)^{-1}$$

Of course the sliderule can be used in solving these problems, but the number of operations can become rather numerous.

Getting the Vector Sum

Consider the problem of finding z in the equation

$$x + jy = z$$

The absolute value of z (written $|z|$) is readily found in two operations on a sliderule as follows: On the C and D scales take the ratio of x and y such that the ratio, greater than unity, appears on the D scale at the index mark on the slide. Opposite this

ratio find its square on the A scale, add one, run the slide up to this new point, and under x or y , whichever is the smaller, on the C scale will be found $|z|$ on the D scale. For example, take $3 + j4$. Set 3 on the C scale opposite 4 on the D scale which places the slide index at 1.333 on the D scale and 1.778 on the A scale. Add 1 and run the slide index up to 2.778 on the A scale. Under 3 on the C scale find the answer, 5, on the D scale. This is in effect a solution of the equation

$$|z| = (x^2 + y^2)^{1/2} = y [(x/y)^2 + 1]^{1/2}$$

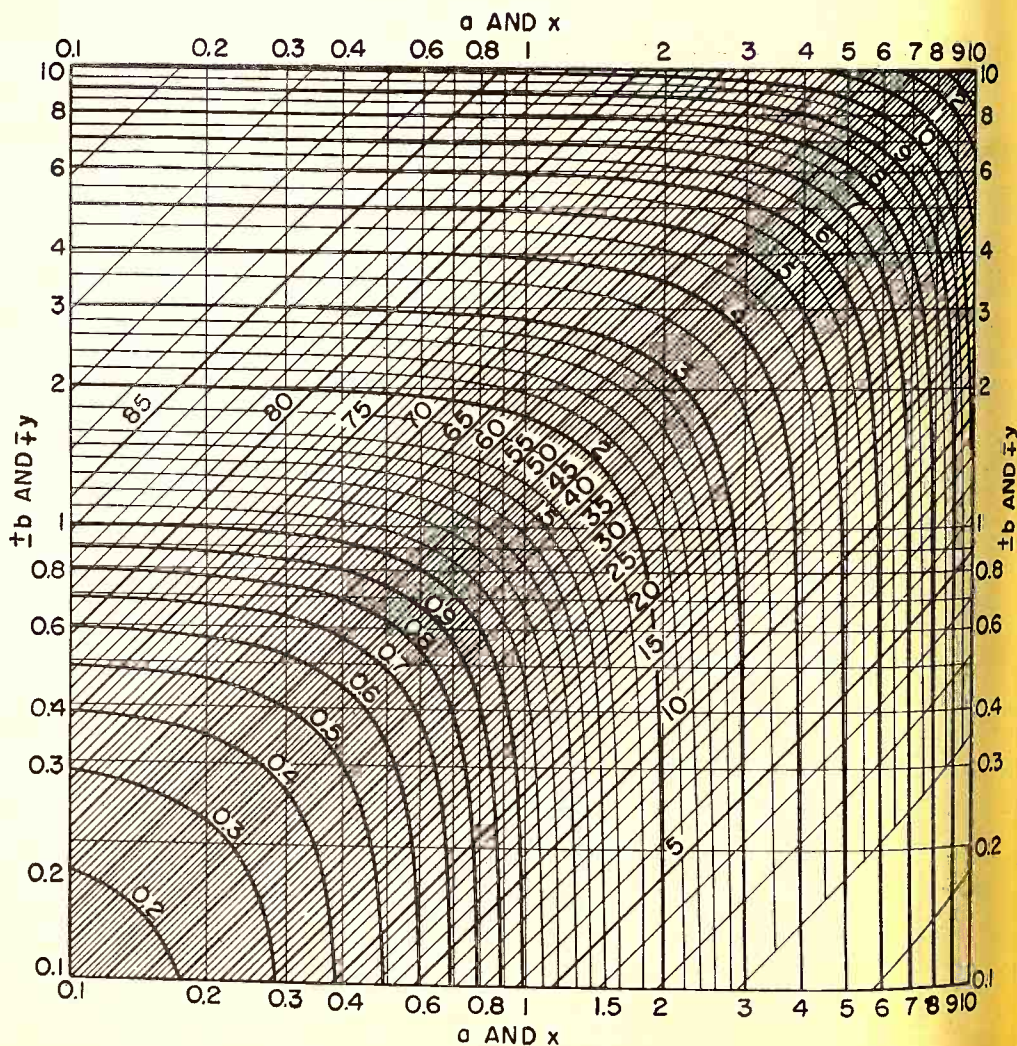


FIG. 1—Graph for converting a complex number from rectangular to polar coordinates and vice versa. The x and y axes are spaced logarithmically; the curved lines represent the argument a ; the straight lines from lower left to upper right give the phase angle, b

Adding the phase angle involves the additional operation of determining the value of the phase angle, $\angle z = \tan^{-1}y/x$.

Chart for Vector Sum

An alternate of the sliderule method is the use of the chart of Fig. 2 in which a transformation from rectangular to polar coordinates is performed in a single operation. The modulus and argument (absolute value and angle) can be found from the x and y components or the reverse operation can be performed. For example, locating the point (3, 4) on the rectangular system gives $|z| = 5$ on the polar coordinates and $\angle z = 53^\circ$ on the diagonal coordinates. A series of operations in a multimesh network, with a multiplicity of sliderule steps

become tedious, but the chart of Fig. 2 gives each reciprocal in a single operation. The vector reciprocal is the solution of the equation

$$x + jy = (a + jb)^{-1}$$

and the solution by means of the chart is simply that of looking up the numbers a and b on the rectangular system and then finding the coordinates of the same point (a, b) on the curvilinear system which are x and y , the sign of y being reversed with respect to the sign of b .

Extending the Range

When the ratio of a to b lies outside the range 1/10 to 10 a simple approximation may be used, and when the numbers are otherwise off the chart a factor of ten or power of ten may be

applied to the number to arrive at a value locatable on the chart, looking up the converted value on the chart and applying the same factor to the answer. To use the $3 + j4$ example again, the reciprocal is found to be $0.12 - j0.16$. As an example of a complex number outside the scale of the chart, take $30 + j40$. Using a factor 1/10, $(30 + j40)/10 = 3 + j4$ and the reciprocal is $(1/10) \times (0.12 - j0.16) = 0.012 - j0.016$. For the case in which the ratio of a and b is greater than 10, the chart is not needed to arrive at a close approximation. For example, let $a + jb = 3 + j40$. The reciprocal is $3/40^2 - j1/40 = 3/1600 - j1/40 = 0.001875 - j0.025$ within less than 1 percent, the true value being close to $0.00187 - j0.0249$.

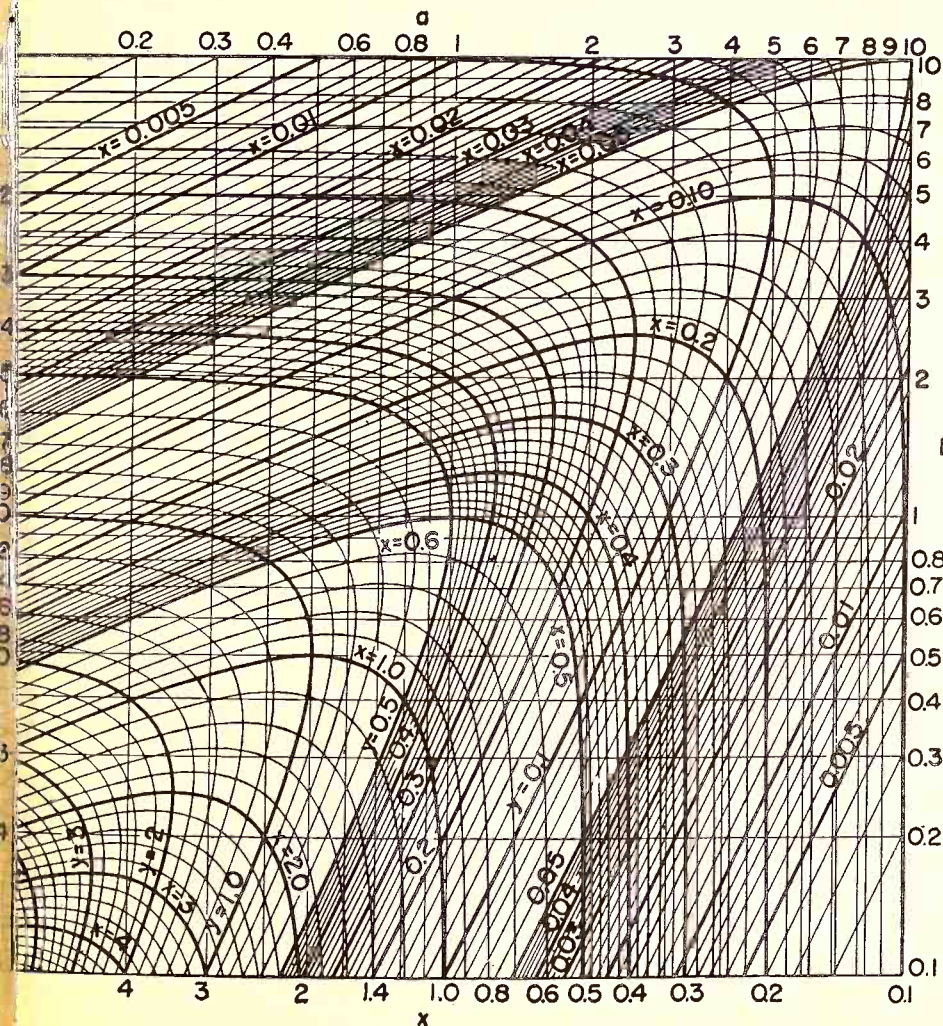


FIG. 2—For determining the reciprocal of a complex number. As an example, the reciprocal of $z = a + jb = 3 + j4$ on the a and b scales (top and right) is found to be $z^{-1} = x - jy = 0.12 - j0.16$ on the x and y scales (bottom and left)

SQUARE ROOT of a COMPLEX NUMBER

Tedious and time-consuming calculations required in finding the square root of a complex number in transmission line and filter calculations can be greatly simplified through the use of this graph

By ROBERT G. NISLE

IN designing certain types of electrical networks the need frequently arises for evaluating the square root of a complex number such as an impedance. If the impedance is expressed in polar coordinates any root can be quickly and easily found, but if the expression is originally given in rectangular coordinates, the required operations are tedious and time consuming. The impedance must first be converted from rectangular to polar form, the square root is then determined, and finally the result is reconverted into rectangular coordinates, thereby requiring three separate and distinct operations.

A method by which the square root of any complex number, expressed in rectangular coordinates, can be easily and quickly determined, also in rectangular coordinates, is given here. The errors to be expected are simply those which result from reading any graph and are negligible for most engineering purposes.

To Extend the Range

If it is necessary to consider ranges outside that covered by the graph, this can be done by multiplying the original complex number by some suitable scale factor (such as 0.01 or 100) so that the problem may be fitted into the range for which the

chart is drawn. The final result will then have to be multiplied by the reciprocal of this scale factor (for example, 100 or 0.01, respectively).

If the original complex number is

$$Z = a + jb$$

the problem before us is to determine

$$Z^{\frac{1}{2}} = x + jy$$

The double set of coordinates relate the quantities x , y , b , and $K = a/b$ so that when any two are known, their intersection determines a position or point on the chart from which the remaining two quantities may be determined. To use the chart, first determine $K = a/b$. Then, knowing K and b , find the intersection of these two coordinates on the vertical and horizontal axes. The point of intersection thus found will also be the point of intersection for the desired values of x and y , read off from the slanting scale.

It should be noted that $Z^{\frac{1}{2}}$ has two roots, a positive root and a negative root. Geometrically, these two possibilities are indicated in graphical form by means of vectors which are directed in opposite directions, or are 180 deg apart. The physical requirements of the problem must be considered when deciding which of the two roots is to be used.

Example 1: Assume that we

have an impedance

$$Z = a + jb = 15 + j20$$

and that it is required to determine

$$Z^{\frac{1}{2}} = x + jy$$

First determine $K = a/b = 0.75$. Locate the intersection of the coordinates, $K = 0.75$ and $b = 20$. At this point read $x = 4.46$ and $y = 2.25$. The desired result is then

$$Z^{\frac{1}{2}} = x + jy = 4.46 + j2.25$$

or its negative value,

$$Z^{\frac{1}{2}} = -x - jy = -4.46 - j2.25$$

Example 2: If the complex number is

$$Z = -15 + j20$$

the result is

$$Z^{\frac{1}{2}} = x + jy = 2.25 + j4.46$$

or, alternatively

$$Z^{\frac{1}{2}} = -x - jy = -2.25 - j4.46$$

Example 3: If the impedance is

$$Z = -15 - j20$$

the final result is

$$Z^{\frac{1}{2}} = -2.25 + j4.46$$

or

$$Z^{\frac{1}{2}} = 2.25 - j4.46$$

Example 4: If the impedance is

$$Z = 15 - j20$$

the final result is

$$Z^{\frac{1}{2}} = -4.46 + j2.25$$

or

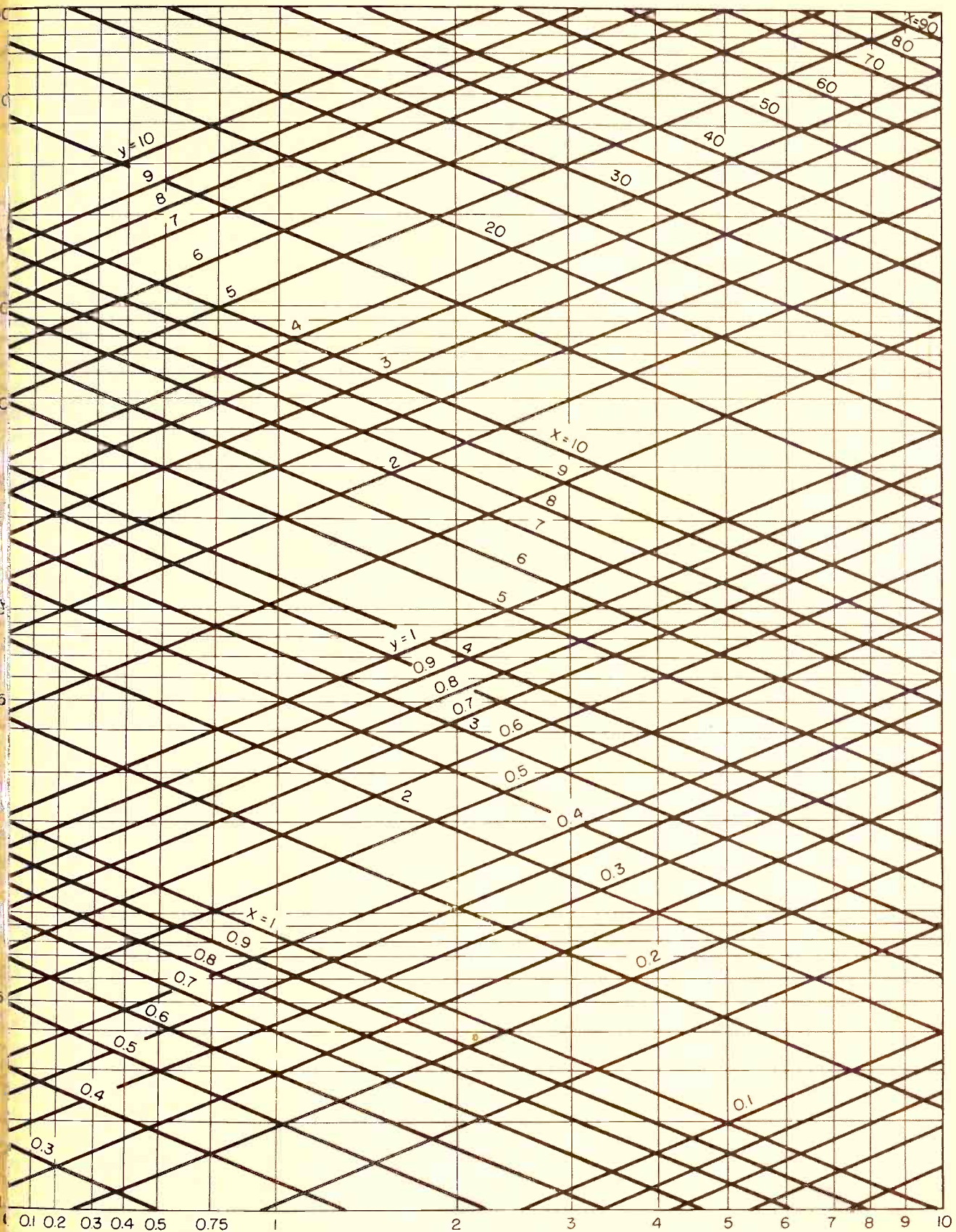
$$Z^{\frac{1}{2}} = 4.46 - j2.25$$

Example 5: If the impedance is

$$Z = 150 + j200$$

we find that $K = 0.75$, $b = 200$, $x = 14.2$ and $y = 7.1$. The result is

$$Z^{\frac{1}{2}} = 14.2 + j7.1$$



R-F POWER-AMPLIFIER DESIGN CHART

By E. H. SCHULZ

THE method described here is based on the following assumptions:

1. The I_p - E_p curves are parallel and equidistant for equal grid bias increments in the positive grid region.
2. $I_p = k(e_g + e_p/\mu)$.
3. The amplification factor, μ , is a constant.

In addition, the grid current and the peak plate current must be approximated.

Symbols are as follows:

- I_m = peak plate current.
- I_1 = peak value of fundamental component of plate current.
- I_2 = peak value of second harmonic component of plate current.
- I_{d-c} = d-c plate current.
- E_b = plate supply voltage.
- E_c = grid bias voltage.
- E_i = peak input from driver stage.
- E_o = peak output voltage.
- $E_{p\min}$ = minimum value of plate voltage.
- $E_{g\max}$ = maximum positive value of grid voltage.
- P_i = d-c plate input power.
- P_o = r-f power output.
- θ = angle of conduction in degrees of fundamental frequency.

If provision is made to vary the principal parts of the circuit (such as grid bias, driving voltage and load coupling) by a small amount, optimum operating conditions may be obtained. Although the method is outlined for class-C design, it may be used for class-B design by making the angle of conduction equal to or slightly larger than 180 degrees.

Since the allowable peak plate current is not given by the tube manufacturer, it must be approximated by multiplying the emission as given in Table I by the filament heating power in watts. Allowance should be made for grid current (usually 10 to 20 percent). For tetrodes and pentodes, allowance should be made for screen current.

Table I — Maximum Emission Current for Various Filament Materials, to be Used in Choosing I_m

Type of filament	Maximum Emission ma per watt of heating power
Tungsten ¹	2 to 4
Thoriated Tungsten ²	10 to 35
Oxide Coated ³	10 to 40

¹ Based on safety factor of 1. Multiply by 0.6 to 0.7 for linear amplifier or for modulated stage to insure linearity.
² Based on safety factor of 3 to 10.
³ Based on safety factor of 5 to 15.

Table II — Comparison of Design and Experimental Values for Class C Amplifier Using Type 10 Tube

	Design	Experimental
I_{d-c}	60	62.5
P_o	19.6	18.8
P_i	30	31.2
$E_{g\max}$	110	118
$E_{p\min}$	130	123
I_g	10-12	12

$E_b = 500$ Volts $f = 800$ kc
 $\theta = 135^\circ$, $E_c = 138$, $I_m = 282$, $I_1 = 106$

Case I. Class C Amplifier with Given Plate Input Power

1. Select tube and plate supply voltage, E_b (high values give greater efficiency but require greater driving power).
2. Determine the d-c plate current, $I_{d-c} = P_i/E_b$.
3. Select several angles of conduction between 100 deg and 130 deg (small angles give greater plate efficiency but require greater driving power). Determine the peak plate current, I_m , and the fundamental component, I_1 , from I_{d-c} and the

chart for each angle.

4. Check I_m against allowable value.

5. Consult I_p - E_p curves and select values of $E_{g\max}$ and $E_{p\min}$ to give required I_m . $E_{p\min}$ should be as small as possible for maximum efficiency, and $E_{g\max}$ should be less than 80 percent of $E_{p\min}$ for low driving power. In the case of tetrodes and pentodes $E_{g\max}$ should not exceed 80 percent of the screen voltage nor should $E_{p\min}$ be less than the screen voltage.

Since the manufacturer's I_p - E_p curves do not extend far enough into the positive grid region, some I_p - E_p curves for positive grid voltages must be sketched in by assuming that the curves for constant grid voltage increments are equidistant and parallel to the straight-line portion of the zero grid voltage curve.

6. Calculate the grid bias from

$$E_c = E_b/\mu + \frac{(E_{g\max} + E_{p\min}/\mu)\alpha}{\cos(\theta/2)}$$

where $\alpha = \frac{1 - \cos(\theta/2)}{(1 - \cos(\theta/2))}$ may be taken directly from the chart.

7. Calculate peak value of the driving voltage $E_i = E_c + E_{g\max}$.

8. Calculate power output, $P_o = I_1 E_o / 2$ where $E_o = E_b - E_{p\min}$. Also calculate plate dissipation $= P_i - P_o$.

9. Assuming that the grid current is 10 to 20 percent of the plate current, determine the approximate driving power from E_i multiplied by the d-c grid current.

10. Check I_{d-c} , E_b , driving power, and plate dissipation against maximum allowable for tube.

11. Choose the angle of conduction that gives the most desirable operation from the standpoint of output, efficiency and

Approximate method of designing class-B and class-C amplifiers, giving sufficient accuracy for most engineering work. Accuracy obtainable for various operating parameters is better than 10 percent for example chosen

avg power. If desired, this may be repeated for several values of E_{pmin} and E_{gmax} .

2 Design tank circuit:
Equivalent impedance of tank,
 $Z_o = E_o / I_1$,

$Z_o = 2\pi f Q$ henrys.
 $C = 1 / (2\pi f)^2 L$ microfarads.

θ may be set arbitrarily between 10 and 15 or may be established by the allowable 2nd harmonic as follows:

$$\text{percent 2nd harmonic} = \frac{66}{I_1} \times I_2$$

$I_2 =$ second harmonic component of plate current for θ . A large Q will give a large harmonic component but will increase the heating loss in the tank circuit.

Class C Amplifier with Given Power Output

Select tube and E_b as in case I.

Choose allowable I_m from case I.

Select E_{pmin} and E_{gmax} as in case I.

Calculate $E_o = E_b - E_{pmin}$
 $P_o = 2P_o / E_o$.

From the ratio I_1 / I_m determine θ and I_{d-c} .

Calculate plate input $P_i =$
and plate dissipation $=$

Calculate E_c , E_t , and driver power as in steps 6, 7, and 10.

Repeat for several values of θ and try different combinations of E_{pmin} and E_{gmax} for a given I_m .

Better results from the point of efficiency, tube life giving power.

Design tank circuit as in case I.

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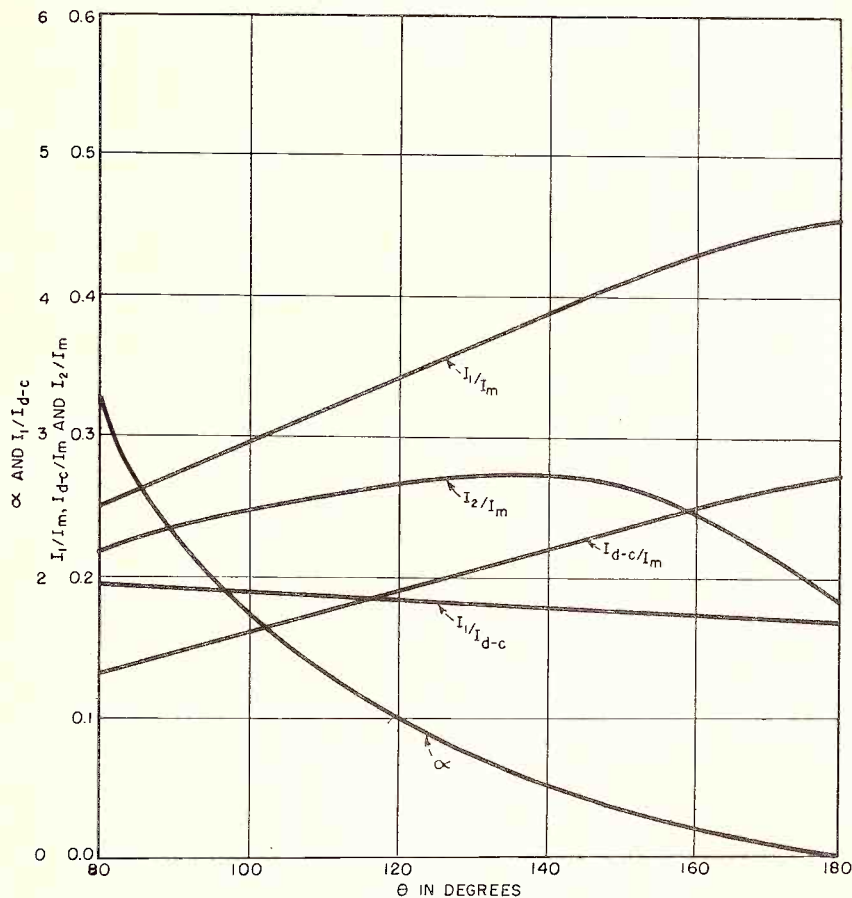
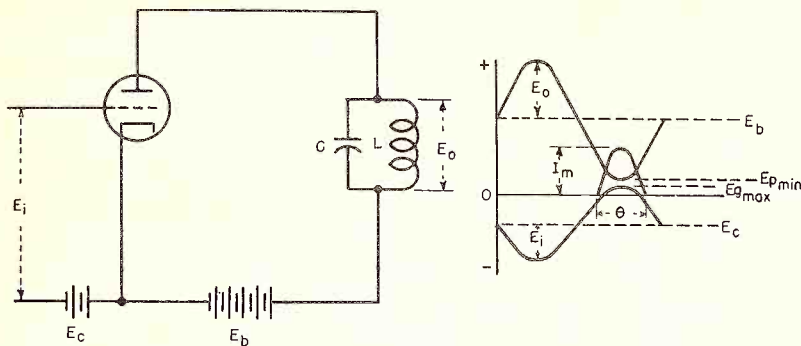


Chart giving approximate operating parameters for optimum operating conditions of class-B and class-C r-f power amplifiers

be adjusted so that the correct E_{gmax} is obtained, as measured by a peak voltmeter. The coupling of the load to the tank circuit should then be increased until the desired plate current is obtained. The tank circuit should be retuned each time that the coupling is changed. Small vari-

ations from the calculated values may improve the overall operating conditions. In amplifiers using tetrodes and pentodes the tank should be tuned for maximum output rather than for minimum plate current, because the plate current is not very critical with respect to tuning.

ATMOSPHERIC ABSORPTION CHART

Varying absorption of microwaves, millimeter waves and infrared rays by the atmosphere is analyzed and charted for region from 0.001 mm to 10 cm. Absorption peaks should be avoided when designing radar and communication equipment

By **ARNOLD SHOSTAK**

FACTORS affecting the amount of absorption experienced by a propagated electromagnetic wave include: path length, water vapor content and oxygen content of the air. The combined effects of these factors are shown in the accompanying chart.

The drop in 4-cm waves is about 0.01 db per kilometer, whereas in the oxygen absorption band around 5 mm the drop may be as high as 10 db per km. The infrared waves from 1 to 500 microns (0.001 to 0.5 mm) usually sustain complete absorption in the first 15 meters, with ensuing attenuation due to scattering.

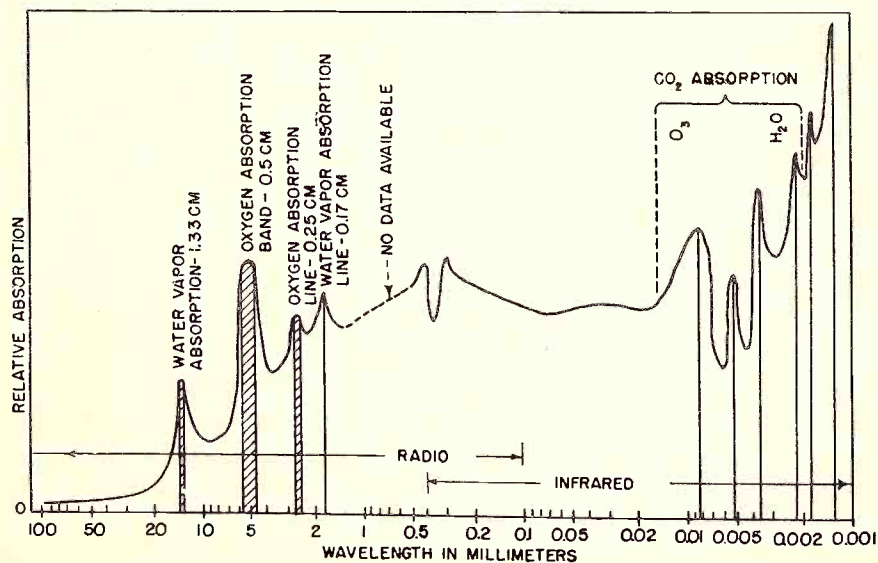
Water exists in the atmos-

phere both in the form of rain drops and in the form of vapor. The amount of water per unit volume is dependent on temperature. Rain drops, as a function of their diameter and the wavelength of the propagated wave, mostly result in scattering of the wave energy. Water vapor, on the other hand, is made up of H₂O molecules which have a permanent electric dipole moment. This moment interacts with the electric vector of the impinging electromagnetic field, with resultant energy absorption. The water vapor absorption band in the region of 1.33 cm is due to this type of interaction. Carbon dioxide also has

a permanent electric dipole moment that causes absorption.

Oxygen does not have a permanent electric dipole moment; it does, however, possess a permanent magnetic moment. This moment interacts with the magnetic vector of the electromagnetic wave to cause absorption, principally around 5 mm.

Most of the factors governing absorption of electromagnetic waves are thus manifested in the very short wavelength regions, from 0.001 mm to about 20 mm. Waves above 3 cm are attenuated by scattering, especially in rainstorms, but the relative effect is usually small compared to absorption in the smaller wavelength regions. In the infrared, violent oscillations in the plot of wavelength versus absorption are noted, principally due to the closely-spaced energy levels of the various molecules of the gases making up the atmosphere. Infrared transmission at sea-level is limited to very short ranges and must exploit the wavelengths of low absorption indicated in the chart. As may be noted, these bands of low absorption, called windows, are of very narrow width, compelling the use of very selective generators and receivers for successful transmission of electromagnetic energy over significant distances at these wavelengths.



Relative atmospheric absorption at sea level and temperature of 20 deg C

HIGH Q MEASUREMENT

Decay of oscillations in pulsed resonant circuit is measured oscillographically, and result is applied to nomograph to obtain Q directly. Technique has been applied to measure values of Q of resonant circuits at frequencies as high as 15 mc

HIGH VALUES of Q (in excess of 1,000) cannot easily be determined under steady-state conditions, however, the transient characteristics of a resonant circuit suggest a method. When a series resonant circuit is excited by a unit impulse, a train of damped oscillations is generated, as indicated by the waveform shown on the accompanying nomograph. The amplitude of the envelope of this waveform at time t_1 may be expressed

$$A_1 = A_0 e^{-\frac{R t_1}{2L}} \quad (1)$$

where A_1 = the amplitude of the envelope at time t_1 , A_0 = the amplitude of the envelope immediately following excitation, R = total equivalent series resistance of the circuit, and L = the equivalent series inductance of the circuit.

The Q of a shock-excited series circuit may be expressed by

$$Q = \frac{2\pi f_0 L}{R} \quad (2)$$

where f_0 is the natural series resonant frequency. Combining Eqs. 1 and 2 and choosing an excitation pulse repetition frequency such that

$$prf = 1/t_1$$

$$Q = \left(-\frac{\pi}{\ln(A_1/A_0)} \right) \left(\frac{f_0}{prf} \right) \quad (3)$$

The accompanying nomograph solves this equation.

Sample Measurement

The laboratory equipments required to obtain the necessary data are a signal generator to provide the prf, a pulse generator, and an oscilloscope to measure the train of damped oscillations.

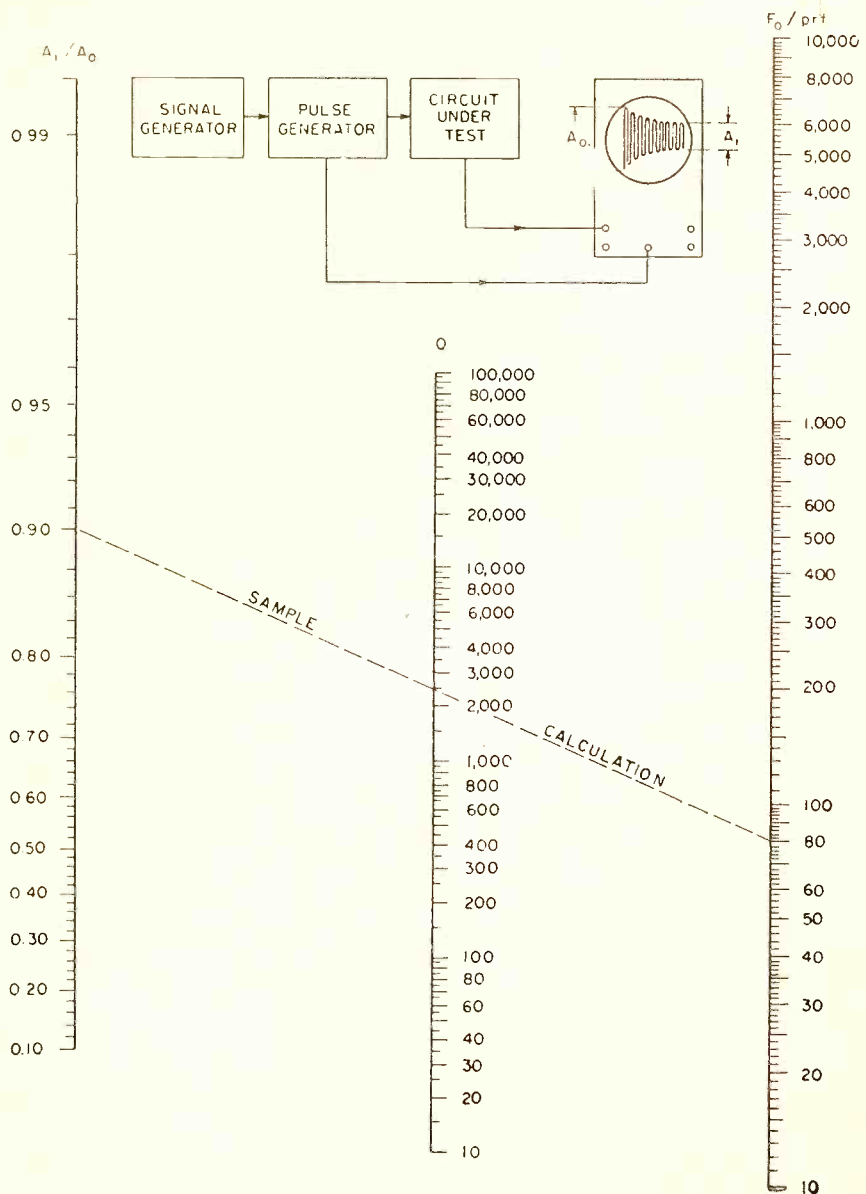
By WILLIAM J. SPAVEN

The equipment is arranged so that the signal generator drives the pulse generator at the required prf. The pulse generator drives the circuit under test, and the oscilloscope reads the output of the circuit, as shown in the

block diagram on the nomograph.

A high-Q circuit, resonant at 20 kc, was to be tested. The ratio A_1/A_0 was determined from the oscilloscope pattern to be 0.90. The prf was 250 cps, or $f_0/prf = 80$. A straight line drawn from $A_1/A_0 = 0.90$ to $f_0/prf = 80$ intersects the Q line at $Q = 2,500$. Verifying with Eq. 3,

$$Q = \left(-\frac{\pi}{\ln 0.90} \right) (80) = 2,420$$



UNIVERSAL EQUALIZER CHART

Modification of familiar Smith chart consolidates on one time-saving plot all positive-value solutions to the two general equations for series, shunt and bridged-T audio equalizers

THE single chart in Fig. 1 replaces as many as eleven conventional equalizer charts, yet gives all solutions containing positive resistances or conductances for the commonly used equalizer structures of Fig. 2. The chart is derived by applying to the two general forms of equalizer equations (Eq. 10 and

By **D. A. ALSBERG**

11 in Fig. 2) the bilinear transform

$$u + jv = (1 + \zeta)/(1 - \zeta) \quad (12)$$

where ζ is a complex number. This transforms the conventional rectangular grid of u and v

to a set of orthogonal circles, all of which pass through the point $\zeta = +1$, and the circle $u = 0$ is identical with the unit circle in the ζ plane. This grid of orthogonal circles representing the u and v coordinates is identical to the grid of the familiar Smith chart.

IMPEDANCE OR
ADMITTANCE
COORDINATES

$\alpha = \text{DB}$
 $\beta = \text{DEGREE}$
 $u = R/R_0 \text{ OR } G/G_0$
 $v = X/R_0 \text{ OR } B/B_0$

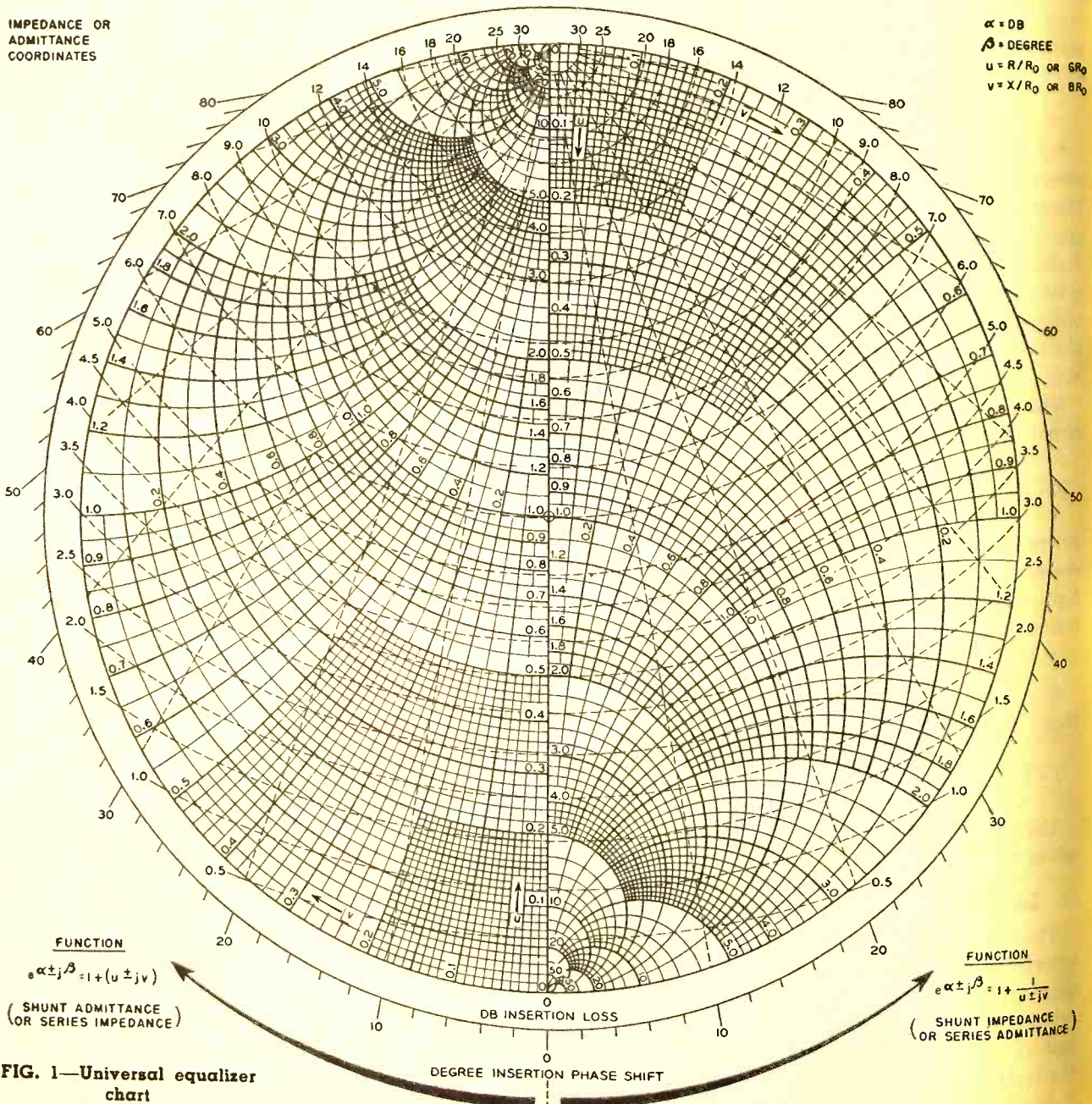


FIG. 1—Universal equalizer chart

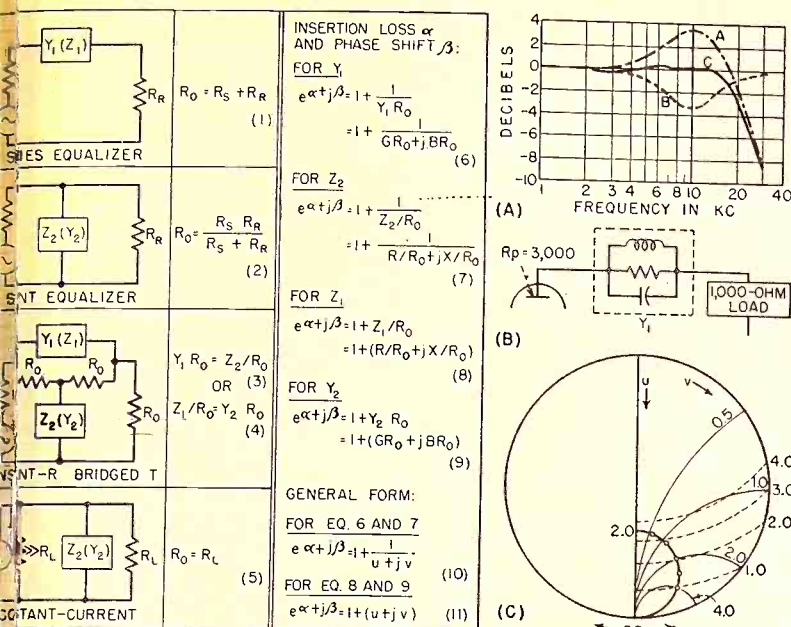


FIG. 2—Basic equalizer circuits, pertinent equations, and example

Using Eq. 10 in the ζ plane, lines of constant insertion loss become circles centered on the point $\zeta = -1$ and whose loci are defined by

$$|b| = -20 \log |(1 + \zeta)/2| \quad (13)$$

Lines of constant phase shift pass through the point $\zeta = -1$ whose angle from the real axis in the ζ plane is equal to the phase shift.

The solution of Eq. 11 in the ζ plane is essentially the same as above except that the center for the loss circles and phase shift is now the point $\zeta = +1$ and the loci of the loss circles are defined by

$$|b| = -20 \log |(1 - \zeta)/2| \quad (14)$$

Applications

Series and shunt equalizer circuits are useful when it is necessary to maintain constant impedance, such as in electron tube interstages. When the load must have constant impedance, the bridged-T equalizer is used. The constant-current equalizer is a special case of the shunt equalizer and is particularly useful in electron tube circuits which behave substantially like constant-current generators, such as pentodes. One use is to compute the effect of shunting parasitic ca-

pacitances on the gain and phase of an electron tube stage. In this case the parasitic shunt reactance would be considered Z_s .

While Eq. 1 to 9 have been written for a pure resistance R_o , R_o may be replaced in all these expressions by a complex impedance Z_o . Then the values u and v in the chart represent the real and imaginary components of the fraction Z/Z_o or the product YZ_o . The chart is also useful when measuring impedance using the insertion loss and phase principle.

Example of Use

Curve A in Fig. 2A represents an amplifier response curve. The objective is to flatten the response peak at 10 kc. A convenient place to perform the equalization is found in the plate circuit of a tube which has an internal plate resistance $R_p = 3,000$ ohms and works into a load of $R_r = 1,000$ ohms, as in Fig. 2B. The shape of curve A suggests use of a parallel-tuned circuit shunted by a resistance in the case of a series equalizer. With three independent elements in the equalizer, three independent parameters may be chosen. As first parameter we choose to tune the circuit to ω_o

= 10 kc. As second parameter we choose to make the equalizer loss exactly 3.5 db at 10 kc, and as third parameter we decide to match exactly the excess gain of 1 db at $\omega_1 = 5$ kc.

Proceeding with the computation on a normalized admittance basis, at resonance the susceptance of the equalizer must be zero. Entering the chart as shown in Fig. 2C on the zero-susceptance line, we find the 3.5-db loss circle intercept at the 2.0 conductance circle. Thus the equalizer must contain a normalized conductance of $GR_o = 2.0$.

At 5 kc the loss was set to 1 db. We now find the intercept between the 2.0 conductance circle and the 1.0-db loss circle at a susceptance of 4.0. From resonance at ω_o

$$\omega_o CR_o - \frac{1}{\omega_o L/R_o} = 0 \quad (15)$$

From the solution of Eq. 10 at ω_1

$$\omega_1 CR_o - \frac{1}{\omega_1 L/R_o} = 4.0 \quad (16)$$

then

$$CR_o = \frac{4}{\left(\omega_1 - \frac{\omega_o^2}{\omega_1}\right)} = 4.25 \times 10^{-6} \quad (17)$$

$$L/R_o = 5.97 \times 10^{-6} \quad (18)$$

From Eq. 17 and 18 the net normalized susceptance of the network at any frequency may be determined. To find the loss associated with each of these susceptance values the equalizer chart is entered on the 2.0 conductance circle and the intercept with the computed susceptance circle is located, at which point the loss value is read. The result is plotted in curve B on Fig. 2A, and the resulting net transmission characteristic is plotted as curve C.

Assuming curve C to be adequately flat, the actual element values of the equalizer are found: From Eq. 1, R_o is 4,000 ohms. Substituting this in $GR_o = 2.0$ gives 2,000 ohms for $1/G$. From Eq. 17, C is 0.0106 μ f. From Eq. 18, L is 23.9 mh.

REVERBERATION TIME NOMOGRAPHS

By R. C. COILE

REVERBERATION TIME is the length of time required for the intensity of a sound to drop to one-millionth of its original intensity, which corresponds to a change of 60 db. The reverberation time of a room may be computed, knowing the dimensions of the room and the acoustical absorption coefficients of the different surfaces, from

$$T = \frac{0.049V}{A \log_e \left(\frac{1}{1-\alpha} \right)} \quad (1)$$

where T is the reverberation time in seconds, V is the volume of the room in cubic feet, A is the total surface area in square feet, α is the average absorption coefficient of the room and is equal to $(A_1\alpha_1 + A_2\alpha_2 + \dots) / (A_1 + A_2)$, and α_1 is the absorption coefficient of area A_1 .

This expression may be simplified into an approximate expression accurate enough for the calculation of reverberation time of most rooms

$$T \cong 0.049 \frac{V}{a} \quad (2)$$

where V is the volume of the room in cubic feet and a is the number of absorption units in the room computed by adding the absorption of each surface: $a = A_1\alpha_1 + A_2\alpha_2 \dots$

Two nomographs have been designed to facilitate rapid calculations of reverberation time. The number of absorption units in a room may be found by using the acoustical absorption nomograph in Fig. 1. Then, knowing the absorption units and the

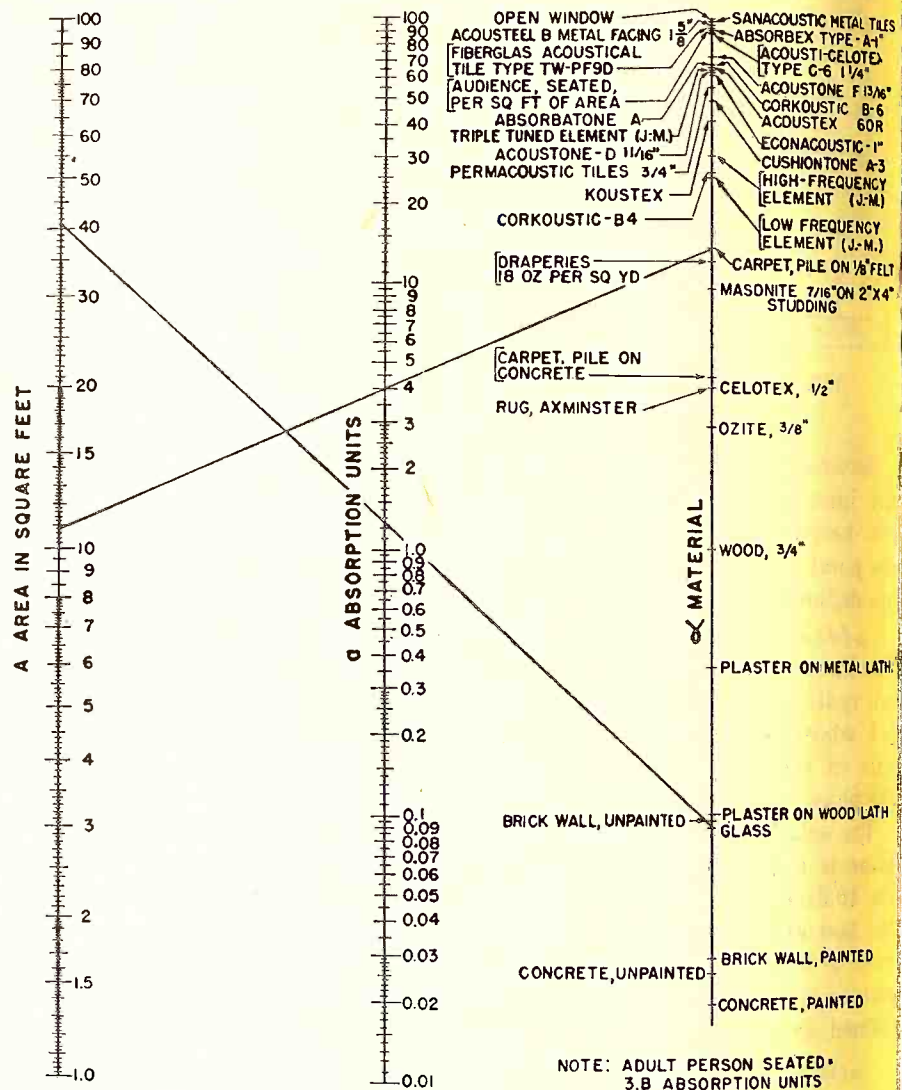


FIG. 1—Acoustical absorption nomograph based on $a = A\alpha$, where α is the acoustical coefficient of the material

volume, the reverberation time is given by the reverberation-time nomograph in Fig. 2.

Example

Find the reverberation time of a room 9 ft wide and 12 ft long, with a ceiling height of 8 ft. The walls and ceiling are of plaster on wood lath. One wall has a window 4 ft by 5 ft. Another wall has a glass door

3 ft by 7 ft. The floor is covered with a pile carpet on 1/2-in. felt. One adult person is in the room.

(a) Compute areas in sq ft, as follows:

$$\text{Carpet } 9 \times 12 = 108 \text{ floor}$$

$$\text{Glass } 4 \times 5 = 20 \text{ window}$$

$$3 \times 7 = 21 \text{ door}$$

41

$$\text{Plaster } 9 \times 12 = 108 \text{ ceiling}$$

$$(8 \times 12) - 21 = 75 \text{ wall minus door}$$

areas of materials in room are measured and number of absorption units of each material is found with first nomograph. Total absorption units are then combined with room volume on second nomograph to obtain directly the reverberation time in seconds

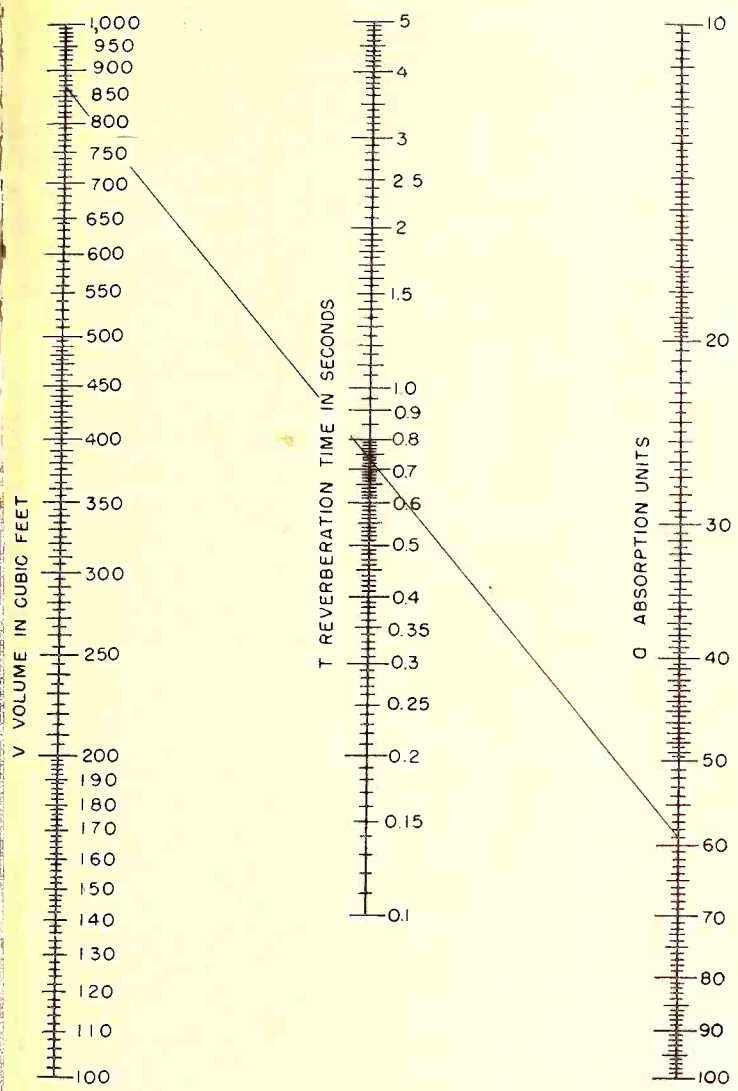


FIG. 2—Reverberation time nomograph, based on $T = 0.049 V/a$. From Fig. 1, a may be obtained graphically

$9 \times 8 = 72$ wall
 $9 \times 8 = 72$ wall
 $(8 \times 12) - 20 = 76$ wall minus window

 403

Compute absorption units, by laying a straightedge between 403 on the area scale and 1 on the material scale of the absorption nomograph in Fig. 1. Read the answer of 58.3 absorption units at the inter-

section of the straightedge with the absorption-units scale. (The range of this nomograph can be extended by multiplying the area scale and the absorption-unit scale by the same factor, such as 10. For example, to find the absorption units of the carpet area of 108 sq ft, connecting a line between 108 on the area scale and carpet pile of $\frac{1}{8}$ -in. felt on the material scale

gives 4.0 absorption units. Multiplying 4.0 by a factor of 10 gives the answer of 40.0 absorption units.)

Similarly, 13.3 absorption units are obtained for 403 sq ft of plaster on wood lath, and 3.8 absorption units constitute the allowance for one person. Adding then gives a total of 58.3 absorption units.

(c) Compute volume of room: $9 \times 12 \times 8 = 864$ cu ft.

(d) Compute reverberation time by laying a straightedge between 864 on the volume scale and 58.3 on the absorption-units scale of the reverberation-time nomograph in Fig. 2. Read the answer of 0.72 sec at the intersection of the straightedge with the reverberation-time scale.

Extending the Range

The range of the reverberation-time nomograph may be extended by multiplying the volume and time scales by the same factor, such as 10, or by multiplying the absorption scale by a factor such as 10 and the time scale by the factor's reciprocal, 1/10.

The acoustical-absorption nomograph was designed by using acoustical coefficients for 512 cycles. For more accurate computations of reverberation time at other frequencies, acoustical coefficients for those frequencies should be employed. The effect of humidity should also be taken into consideration.

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WAVELENGTHS of SOUND

By BERTHA W. HENVIS

Velocity of Sound in Solids

Material	Longitudinal Bar Velocity in cm per sec	Plate (Bulk) Velocity in cm per sec
Aluminum	5.24x10 ⁵	6.4x10 ⁵
Antimony	3.40x10 ⁵	.....
Bismuth	1.79x10 ⁵	2.18x10 ⁵
Brass	3.42x10 ⁵	4.25x10 ⁵
Cadmium	2.40x10 ⁵	2.78x10 ⁵
Constantan	4.30x10 ⁵	5.24x10 ⁵
Copper	3.58x10 ⁵	4.6x10 ⁵
German Silver	3.58x10 ⁵	4.76x10 ⁵
Gold	2.03x10 ⁵	3.24x10 ⁵
Iridium	4.79x10 ⁵	.....
Iron	5.17x10 ⁵	5.85x10 ⁵
Lead	1.25x10 ⁵	2.4x10 ⁵
Magnesium	4.9x10 ⁵	.....
Manganese	3.83x10 ⁵	4.66x10 ⁵
Nickel	4.76x10 ⁵	5.6x10 ⁵
Platinum	2.80x10 ⁵	3.96x10 ⁵
Silver	2.64x10 ⁵	3.60x10 ⁵
Steel	5.05x10 ⁵	6.1x10 ⁵
Tantalum	3.35x10 ⁵	.....
Tin	2.73x10 ⁵	3.32x10 ⁵
Tungsten	4.31x10 ⁵	5.46x10 ⁵
Zinc	3.81x10 ⁵	4.17x10 ⁵
Cork	0.50x10 ⁵	.....
Crystals, quartz,		
X-cut	5.44x10 ⁵	5.72x10 ⁵
ADP (NH ₄ H ₂ PO ₄)		
45° Z-cut	3.28x10 ⁵	4.92x10 ⁵
Rochelle Salt,		
45° Y-cut	2.47x10 ⁵	.....
Rochelle Salt,		
45° X-cut	See Fig. 2	
Rochelle Salt,		
L-cut	.....	5.36x10 ⁵
Tourmaline, Z-cut	.....	7.54x10 ⁵
CaF ₂ (fluorite),		
X-cut	6.74x10 ⁵	7.18x10 ⁵
NaCl (Rock salt),		
X-cut	4.51x10 ⁵	4.78x10 ⁵
NaBr, X-cut	2.79x10 ⁵	3.2x10 ⁵
KCl (sylvite),		
X-cut	4.14x10 ⁵	4.38x10 ⁵
KBr, X-cut	3.38x10 ⁵	3.48x10 ⁵
Glass,		
heavy flint.....	3.49x10 ⁵	3.76x10 ⁵
extra light flint	4.55x10 ⁵	4.80x10 ⁵
heaviest crown	4.71x10 ⁵	5.26x10 ⁵
crown	5.30x10 ⁵	5.66x10 ⁵
quartz	5.37x10 ⁵	5.57x10 ⁵
Granite	3.95x10 ⁵	.....
Ivory	3.01x10 ⁵	.....
Marble	3.81x10 ⁵	.....
Slate	4.51x10 ⁵	.....
Wood, elm	1.01x10 ⁵	.....
oak	4.1x10 ⁵	.....

Velocity of Sound in Liquids

Material	Temperature in deg C	Velocity in cm per sec
Alcohol, ethyl	12.5	1.24x10 ⁵
	20	1.17x10 ⁵
Benzene	20	1.32x10 ⁵
Carbon bisulfide	20	1.16x10 ⁵
Chloroform	20	1.00x10 ⁵
Ether, ethyl	20	1.01x10 ⁵
Glycerine	20	1.92x10 ⁵
Mercury	20	1.45x10 ⁵
Pentane	18	1.05x10 ⁵
	20	1.02x10 ⁵
Petroleum	15	1.33x10 ⁵
Turpentine	3.5	1.37x10 ⁵
	27	1.28x10 ⁵
Water, fresh	17	1.43x10 ⁵
Water, sea	17	1.51x10 ⁵

Velocity of Sound in Gases

Material	Temperature in deg C	Velocity in cm per sec
Air	0	0.331x10 ⁵
	20	0.343x10 ⁵
Argon	0	0.319x10 ⁵
	300	0.307x10 ⁵
Ammonia gas	0	0.415x10 ⁵
Carbon dioxide	0	0.259x10 ⁵
Carbon monoxide	0	0.338x10 ⁵
Chlorine	0	0.206x10 ⁵
Deuterium (heavy hydrogen)	0	0.890x10 ⁵
Ethane	10	0.308x10 ⁵
Ethylene	0	0.317x10 ⁵
Hydrogen	0	1.28x10 ⁵
Hydrogen bromide	0	0.200x10 ⁵
Hydrogen chloride gas	0	0.296x10 ⁵
Hydrogen iodide	0	0.157x10 ⁵
Hydrogen sulfide	0	0.289x10 ⁵
Helium	0	0.97x10 ⁵
Methane	0	0.430x10 ⁵
Neon	0	0.435x10 ⁵
Nitric oxide	10	0.324x10 ⁵
Nitrogen	0	0.334x10 ⁵
	20	0.351x10 ⁵
Nitrous oxide	0	0.26x10 ⁵
Oxygen	0	0.316x10 ⁵
	20	0.328x10 ⁵
Sulphur dioxide	0	0.213x10 ⁵
Water vapor	0	0.401x10 ⁵
	100	0.405x10 ⁵

THE TABLES give the longitudinal bar and bulk velocities of sound in various solids, as well as the velocity of sound in some liquids and gases.

The effective velocity of sound, V , to be used in these calculations is a rather complex function of the exciting frequency and the shape and dimensions of the vibrating element. Very few three-dimensional elastic solid problems have been studied in detail, but the following comments may be used as a guide in obtaining an approximate value of the effective velocity in the elements of many vibrating systems.

For cylindrical elements of approximately circular or square cross-section, with free sides, the effective velocity varies with the ratio of diameter to wavelength as illustrated by Fig. 1A, where V_3 is the bulk velocity, V_1 is the long bar velocity and V_2 is the minimum velocity. For most metal backing materials the ratio V_2/V_1 is about 0.65.

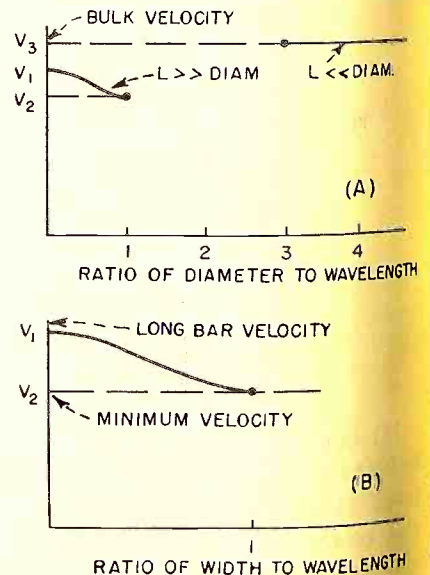
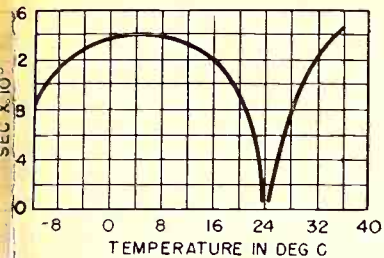


FIG. 1—Variation of velocity of sound with dimensional ratios of solids

velocity of sonic or ultrasonic energy varies over a range of 50 to 1, depending on the medium. Once velocity is determined, by using the table below, the wavelength for any frequency from 10 cycles to 100 megacycles can be found on the nomograph



Variation of longitudinal velocity of degree X-cut Rochelle-salt crystal with temperature

For rectangular elements with thicknesses whose thickness is less than the width, the effective velocity for the element vibration is extension (not thickness) is with the ratio of width to length as illustrated by Fig. Crystals are usually of such that this curve is applicable. ratio V_2/V_1 can be taken as to 0.8 for most of the of crystals in general use. Constraints on the sides of the cylindrical elements have the of increasing the ratio of diameter to wavelength. Simi-constraining the sides of angular elements increases effective ratio of width to length.

The velocity for a zero diameter-to-wavelength ratio is the shear velocity, and the velocity for an infinite diameter-to-wavelength ratio is the bulk velocity.

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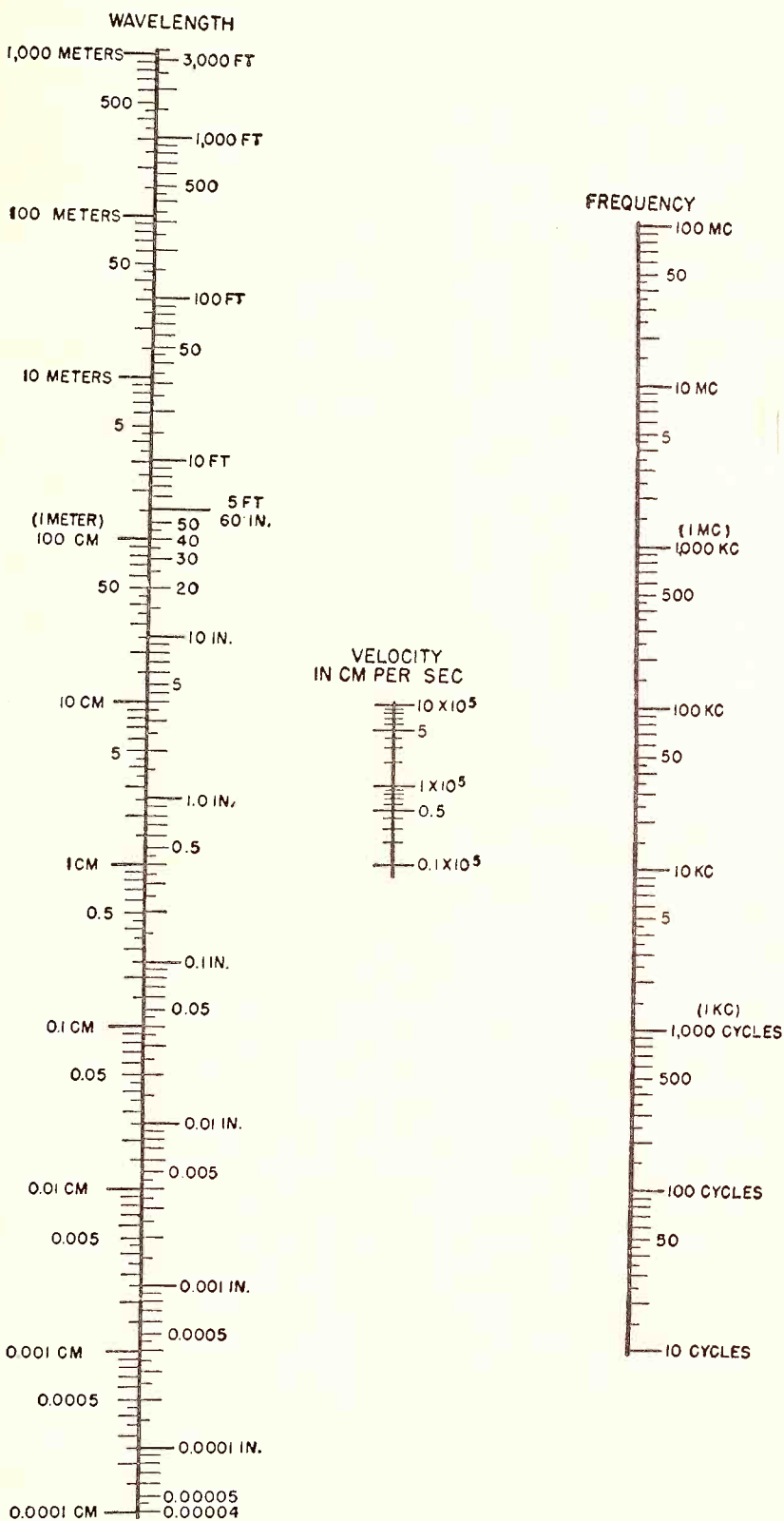


FIG. 3—Nomograph based on relation that velocity is equal to product of frequency and wavelength. When any two known values are connected by straightedge, intersection with third scale determines value sought

COMBINING SOUND LEVELS

Simple nomogram dispenses with the need for log tables, decibel tables or a slide rule when determining the total acoustical power resulting from the combination of two or more sounds

By W. B. CONOVER

TWO OR MORE SOUNDS combine to give a total sound whose acoustical power is the sum of the power involved in the individual components. Since sound levels are expressed in decibels, the sound level of each component must be converted to its corresponding power ratio, added to the power ratio of the other components, and the total power ratio reconverted to decibels to determine the total sound level.

A straightedge intersecting the outer scales of the nomogram at positions corresponding to the individual sound levels db_1 and db_2 intersects the center scale at db_T , which is the total sound

level. For example, individual sound levels of 8 and 10 decibels will be found to give a total of 12.1 decibels.

Any two equal sound levels combine to produce a sound which is 3 decibels higher than either of them separately. Thus 7.5 db and 7.5 db combine to yield 10.5 db; 0 db and 0 db give 3 db.

It is necessary to choose a con-

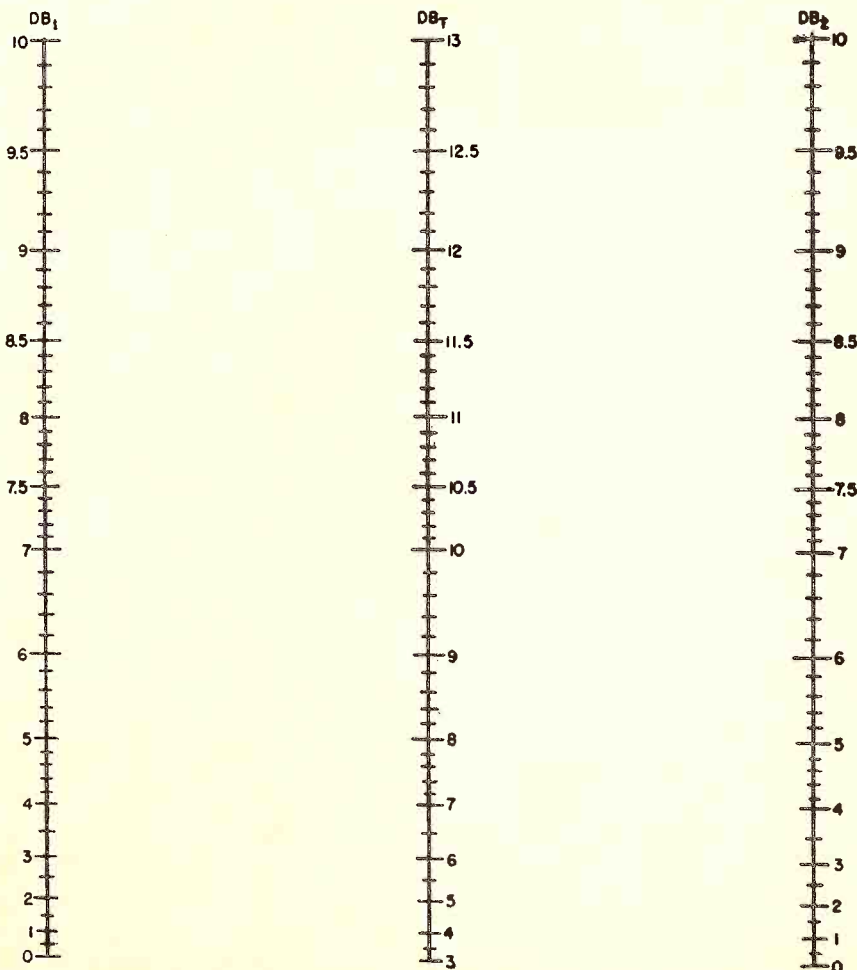
venient reference level such that the individual components are within 10 db of it. Thus, for the total of 62 db and 67 db, a reference level of 60 db is chosen. Since the components are 2 and 7 db above this reference, the resultant 8.2 db given by the nomogram is added to the reference, giving a total of 68.2 db.

When a difference of more than 10 db exists between two sound levels, the contribution of the smaller may be neglected.

Other Uses

One component of noise can be found when the other component and the total noise are known. This is useful in correcting sound-level meter readings for ambient noise. For example, a sound-level meter shows 64.5 db in the neighborhood of a certain machine when it is operating, and an ambient noise reading of 60 db when the machine is turned off. What is the noise level at the same location due to the machine alone? Choosing 60 db as the reference level, a straightedge is aligned with 0 db (60-60) on the db_1 scale, and 4.5 db (64.5-60) on the db_T scale, giving a reading of 2.6 db on the db_2 scale. Adding this to the reference level of 60 db results in a noise level of 62.6 db for the machine alone.

When more than two sound levels are to be combined, the total of two components is determined and combined with a third component, the new total combined with a fourth component, and so on. This same process may be employed to determine, in decibels, the rms value of a complex voltage or current wave when its harmonics are expressed in decibels.



MINIMUM-LOSS MATCHING PADS

A simple nomograph gives the two resistance values needed in an L-type network for matching unequal impedances with minimum power loss, and also gives directly the amount of loss in db. Multiplying factors are easily used to extend ranges

A TWO-RESISTANCE network for matching two unequal impedances provides proper matching with a minimum of power loss. The accompanying nomograph solves for the resistance values needed.

Example 1. Match a 72-ohm source to a 52-ohm load with a minimum of power loss. Determine the loss in db.

By **JOSEPH C. BREGAR**

Solution. Adjust a straightedge to connect 72 on the R_a scale and 52 on the R_b scale (R_a must be greater than R_b , and therefore $R_a = 72$ and $R_b = 52$). The intercept on the db loss scale

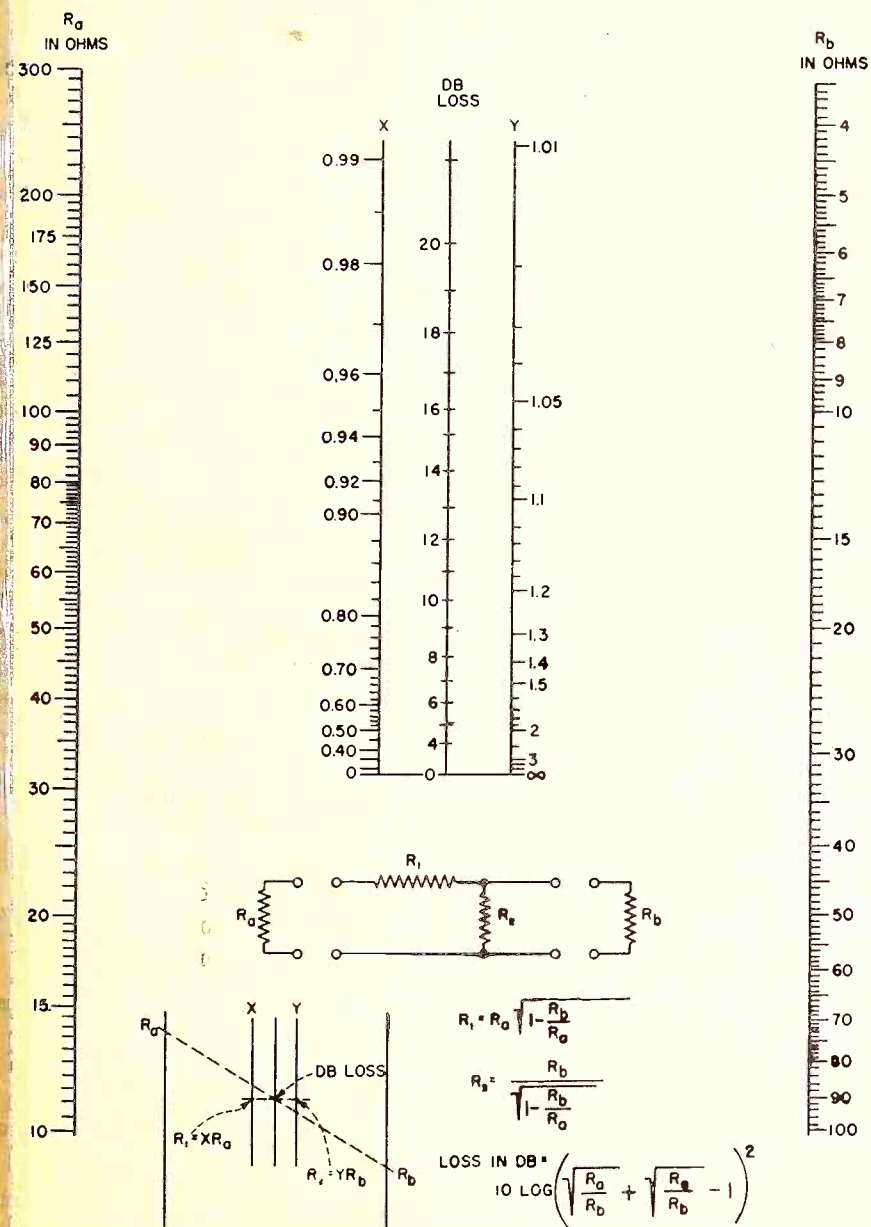
shows the matching-pad loss as 5.1 db. Next, adjust the straightedge at right angles to the loss line and through the 5.1-db point, and read the X and Y values as $X = 0.53$ and $Y = 1.9$. The desired resistor values are then $R_1 = XR_a = 0.53 \times 72 = 38$ ohms, and $R_2 = YR_b = 1.9 \times 52 = 99$ ohms.

The scale ranges are chosen for common impedance values. The nomograph may be used for any values by the application of the same multiplier to the R_a and R_b scales. No multipliers are required for the loss scale or the X and Y values. The X and Y values are applied to the original problem values of R_a and R_b in determining R_1 and R_2 .

Example 2. Match a 3,000-ohm source to a 600-ohm load with a minimum of loss. Determine the loss.

Solution. A convenient scale factor is 1/10. Applied to the problem values, R_a becomes 300 and R_b becomes 60. Connect these points with a straightedge and read the pad loss as 12.5 db. Next, read the X and Y values as 0.89 and 1.12 respectively. Applying these values to the original problem impedances of 3,000 and 600 ohms gives $R_1 = 0.89 \times 3,000 = 2,700$ ohms and $R_2 = 1.12 \times 600 = 670$ ohms.

The matching of impedances of more than 30-to-1 ratio involves high power losses, and other types of coupling networks are employed. For impedance matching when power loss is unimportant and the ratio of impedances is more than 30-to-1, the X and Y values approach 1; then $R_a = R_1$ and $R_b = R_2$ for proper matching.



DESIGN OF T PADS

Graphs for determining resistance of the three elements of dissymmetrical T-pad networks facilitate design of pads having attenuation of as much as 25 db, and impedance mismatch ratios up to 5 to 1. Graphs apply to symmetrical pads with matched loads

IN radio and communications work the necessity for pads or attenuators of definite electrical loss and definite terminal impedance often arises. It is the purpose here to facilitate the design and construction of such pads of symmetrical or dissymmetrical T configuration, through simple, rapid, graphical methods, without making necessary recourse to the usual mathematical design equations.

In the following discussion a and b will refer to the series impedances and c the shunt impedance of the three-element T network. As pads with elements other than pure resistances are seldom encountered, only the case of a pure resistance network will be discussed, although the symbol Z will be used. If a balanced pad is desired, it is necessary merely to place half of the value of a and half of the value of b in the two lower branches of the pad.

Three individual graphs are given in Fig. 1, one for each of the impedance elements in a T network. Each graph contains a family of curves, one for each of several different values of attenuation or loss in decibels. The family of curves is plotted to show the normalized resistance (for the element a , b or c of the T for which the curve applies) as ordinates, against the ratio of impedance transformation as abscissa. Since the curves are plotted for the normalized impedance of 1 ohm, the resistances found from the curves must be multiplied by the actual impedance value of the input circuit to obtain the true values of resistance for the elements of the de-

By **EDWIN Y. WEBB, Jr.**

sired T network. By plotting normalized impedances, only one set of curves is required no matter what the impedance value may be. It should be noted that while the curves are plotted for a dissymmetrical T network, which is useful in matching unequal impedances, the curves are equally useful for the symmetrical T network for matching equal impedances since in the latter case the impedance transformation is 1/1, and a and b are equal.

The graphs can be used for any impedance ratio normally encountered in practice. If an impedance ratio less than 1 is encountered, the T network can be reversed, for purposes of analysis, to obtain a transformation ratio greater than 1. The curves can of course be used for uneven ratios, such as 2.5/1 or 3.7/1. The curves can likewise be used for symmetrical T pads, for in this case the terminal impedances Z_1 and Z_2 will be alike. The network impedances a and b will also be alike, and hence we need only use the curves for determining two separate constants a and c . The curves are plotted more accurately than the accuracy of commercial resistors, and consequently errors involved from the graphical design method will be negligible for ordinary purposes. Care should be exercised in reading the curves, however, to ascertain that the scales are not misinterpreted.

Note that the actual values of

Z_1 and Z_2 (the terminal impedances) do not affect in any way whatever the values used in plotting the curves as only their ratios were used. Therefore, for a 10-db pad with terminal impedances of 5 and 10 ohms the identical points on the curves will be used as if the terminal impedances were 300 and 600 ohms, as in both cases the ratio of Z_2 to Z_1 is 2 to 1.

The loss of the pad is obtained by calculating the ratio of the power transferred from Z_1 to Z_2 with the pad in the circuit and again with the pad removed from the circuit. Assuming 1 volt applied, and impedances of 100 and 200 ohms, the power transferred when the pad is out of the circuit is

$$P_o = I^2 R = \left(\frac{1}{300}\right)^2 \times 200$$

With the pad in the circuit, the power absorbed by Z_2 is

$$\begin{aligned} P_i &= I^2 R \\ &= \left[\left(\frac{1}{200}\right) \left(\frac{99.2}{200 + 145 + 99.2}\right) \right]^2 \times 200 \\ &= \left[\left(\frac{1}{200}\right) \left(\frac{99.2}{444.2}\right) \right]^2 \times 200 \end{aligned}$$

The loss in decibels is then

$$\begin{aligned} db &= 10 \log_{10} (P_o/P_i) \\ &= 10 \log_{10} \left[\frac{\left(\frac{1}{300}\right)^2 \times 200}{\left[\left(\frac{1}{200}\right) \left(\frac{99.2}{444.2}\right) \right]^2 \times 200} \right] \\ &= 10 \log_{10} \left[\left(\frac{200}{300}\right) \left(\frac{444.2}{99.2}\right) \right]^2 \\ &= 9.5 \text{ db.} \end{aligned}$$

Hence, the terminal impedances as calculated from the graphs are correct. The loss of the network is actually 9.5 db instead of the 10 db for which it is designed, but the error is sufficiently small to be neglected for nearly all practical purposes.

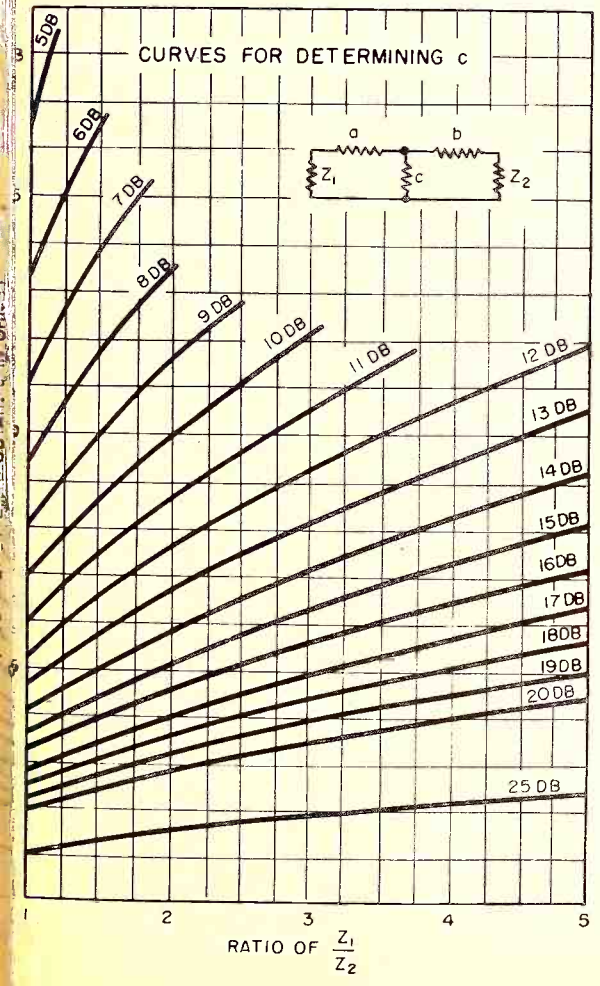
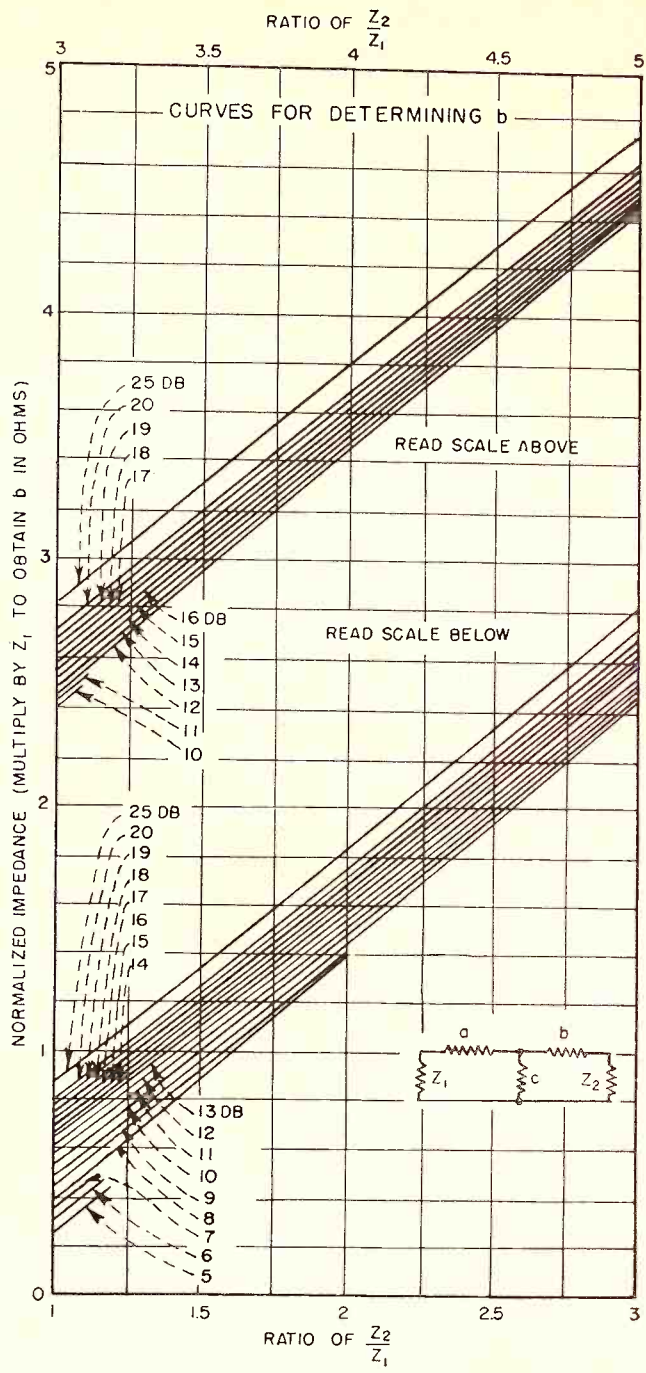
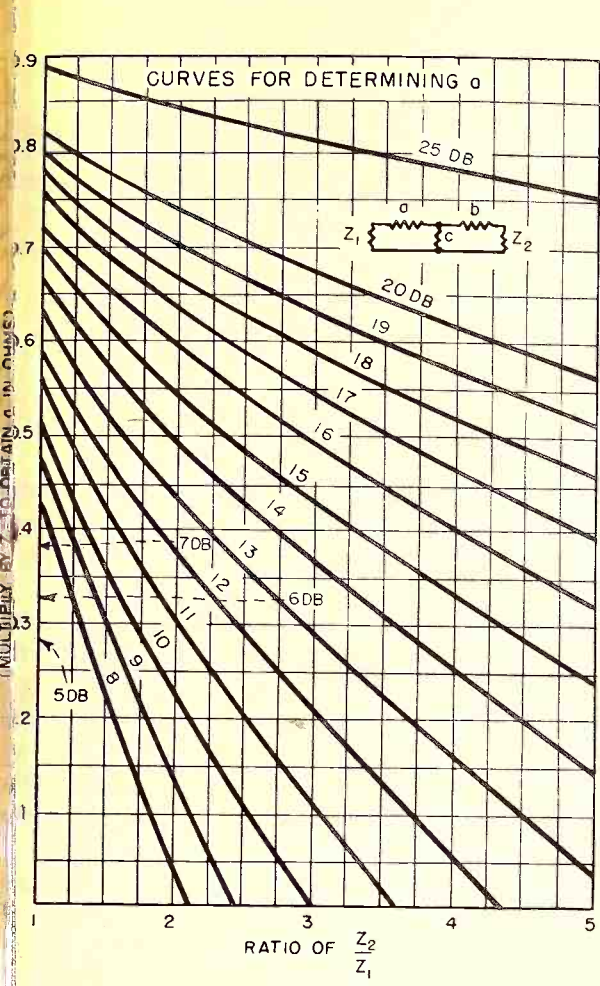


FIG. 1—To use the graphs it is necessary to know: (1) the attenuation or loss, in decibels, which the network is to provide; (2) the impedance Z_1 , from which power is fed to the T attenuator, and (3) the impedance Z_2 , into which the T network feeds. The first condition specifies the network loss, and hence indicates which curve of the three families is to be selected for any particular problem. The second and third conditions determine the impedance transformation ratio, and hence determine at what point on the abscissa the graph is entered. From this point of entry, project vertically upward until the desired curve is reached; then project to the left and read the normalized resistance for the specified conditions for the element for which the chart applies. Multiply this reading by Z_1 to obtain the true resistance of the element for the specified conditions

DESIGN OF LOUDSPEAKER DIVIDING

Four-parameter chart gives directly the required values of L and C for a parallel-connected constant-resistance dividing network, at any desired crossover frequency and line impedance, when separate low and high-frequency loudspeakers are employed

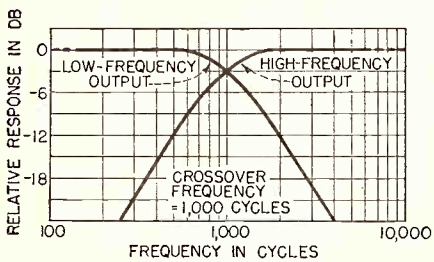


FIG. 1—Ideal transmission characteristics of a 1,000-cycle dividing network

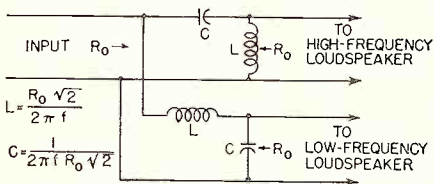


FIG. 2—Circuit of parallel-type constant-resistance dividing network, with design equations (L is in henrys, C is in farads, f is crossover frequency in cycles, and R_0 is impedance in ohms of input and each output branch of the network)

By EARL R. SCHULER

WITH divided-range loudspeaker systems, an electrical dividing network must be used to separate the low and high frequencies into two bands so that each may be reproduced by the proper loudspeaker unit. To approximate the ideal network transmission characteristics of Fig. 1, the parallel-type constant-resistance dividing network of Fig. 2 is favored for its simplicity since both inductors (and both capacitors) have the same values.^{1,2} The chart in Fig. 3 gives these values of L and C directly for various values of

crossover frequency f and line impedance R_0 .

Although the values of L and C may be computed easily from the simple formulas given in Fig. 2, the chart will be found very useful for preliminary design problems. The chart may be used beyond the ranges shown by employing one of the following sets of multiplying factors for the scales:

R_0	f	L	C
1	10	0.1	0.1
10	1	10	0.1
10	10	1	0.01

To prevent the generation of harmonics and intermodulation products by the network, the inductance of the coils must be independent of the signal level. Since air-core inductors are inherently free of this difficulty they are usually preferred over iron-core types. They must be rather large, however, and must be wound with heavy wire in order to obtain a reasonably high Q . A value of 20 at the crossover frequency is satisfactory. Information on the design of air-core inductors may be found in the literature^{3,4}.

EXAMPLE 1: A dividing network is required for use in a 15-ohm line, the crossover frequency to be 1,000 cycles. From the point of intersection of the diagonal 15-ohm and 1,000-cycle lines on the chart, read out to the left and upper edges of the chart to the values 3.37 mh and 7.50 μ f for L and C . Coils may be wound especially for this value,

and standard-size capacitors may be connected in parallel to make up the required capacitance within 5 to 10 percent.

It is permissible to redesign the network for a slightly different crossover frequency to permit use of standard capacitors. New values taken off the chart, starting from the intersection of the 15-ohm and 8- μ f lines, are 938 cycles and 3.60 mh.

EXAMPLE 2: A dividing network is required for use in a 600-ohm line, the crossover frequency to be 500 cycles. This installation will require the use of separate autotransformers to match the low- and high-frequency units to the 600-ohm outputs of the network. Since 600 ohms does not appear on the chart, preliminary values must be determined from the intersection of the 60-ohm and 500-cycle lines; these are found to be 27 mh and 3.75 μ f. Since the value for R_0 must be multiplied by 10 and there is no change to be made in the frequency (f multiplied by 1), the conditions for determining the final values are met by applying the multiplying factors on line 2 of the table. This gives final values of 600 ohms, 500 cycles, 270 mh, and 0.375 μ f for the network.

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NETWORKS

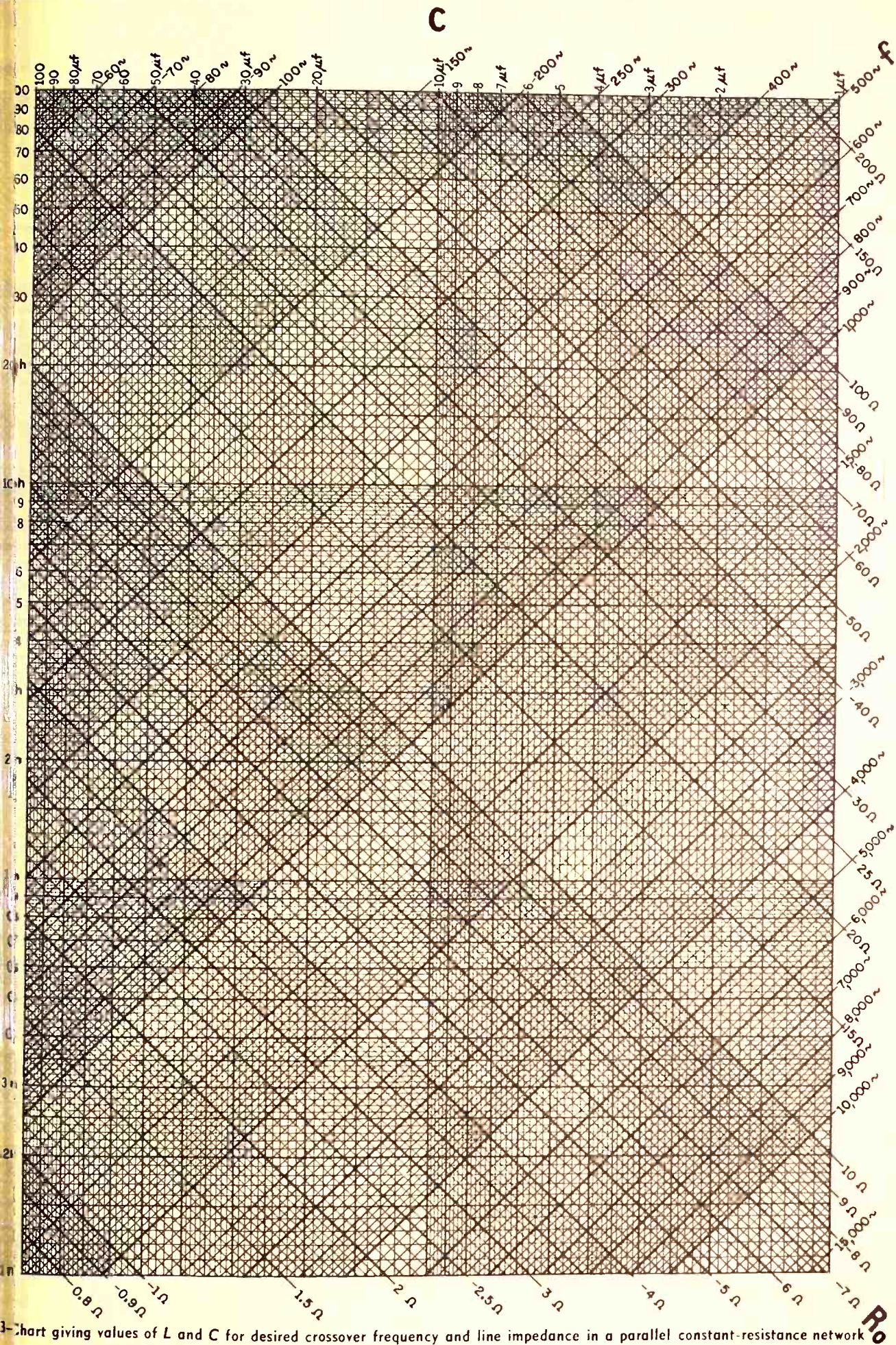
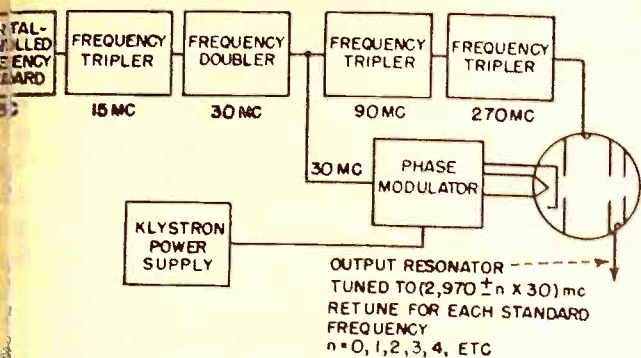
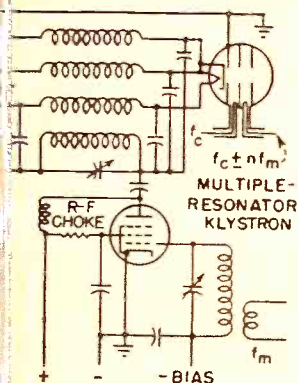
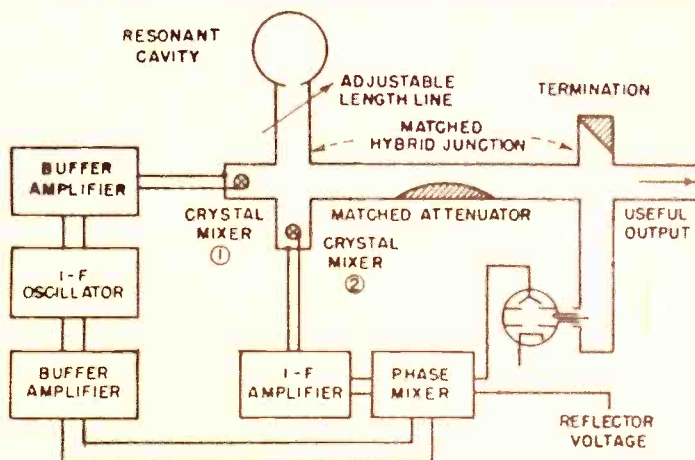


Chart giving values of L and C for desired crossover frequency and line impedance in a parallel constant-resistance network



FREQUENCY STANDARD—A phase-modulated signal derived from the same source as the input signal for a klystron frequency multiplier can be used to generate standard frequencies in the microwave region. Modulator unit is similar to that shown for phase-modulation of a klystron amplifier. The klystron multiplication factor is 11. The choice of 270-mc input frequency and 30-mc modulation frequency requires only four sidebands to cover the frequency spectrum between harmonics. For example, the next standard frequency above $2,970 + 120$ mc is a sideband of the 12th harmonic of the input frequency, or $3,240 - 120$ mc

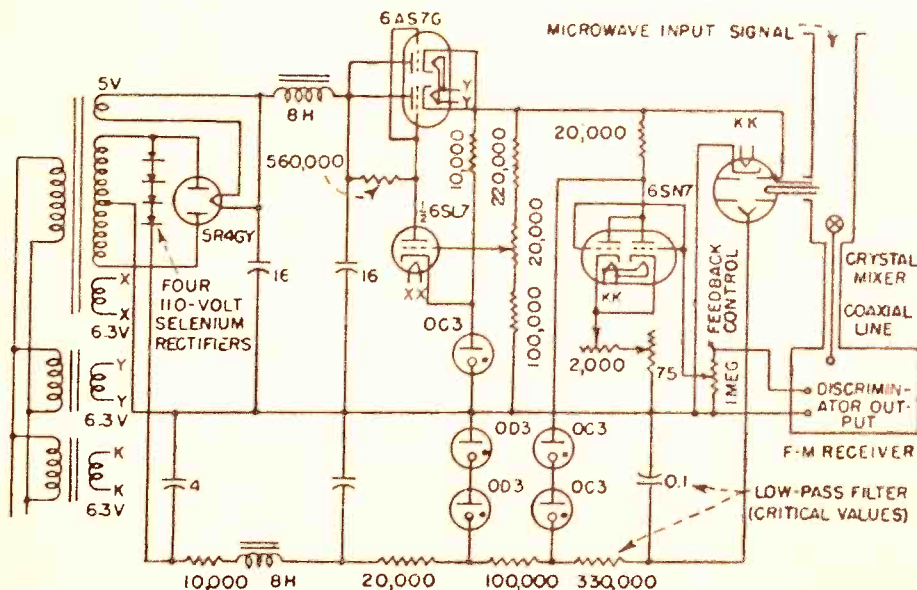
RESONANT CAVITY CONTROL OF REFLEX OSCILLATOR—Frequency stabilization of a reflex klystron oscillator can be achieved by locking the oscillator to a resonant cavity. A block diagram of a method developed by R. V. Pound is illustrated. A hybrid junction (magic tee) provides a sample of the output of the reflex klystron oscillator. When the oscillator frequency coincides with the resonant frequency of the cavity there is no signal at mixer crystal No. 1 and no i-f signal at mixer No. 2. A drift in frequency produces an r-f signal at the first crystal which becomes modulated at the intermediate frequency and is reflected to the second mixer where it is demodulated to produce an i-f signal. The phase and amplitude of the demodulated i-f signal are determined by the relation between the klystron frequency and the cavity frequency. The phase mixer compares the demodulated i-f with the original source and produces a signal which corrects the klystron frequency



PHASE MODULATION OF KLYSTRON AMPLIFIER—Some microwave transmitter systems can advantageously use phase modulation, either as a device for modulating a klystron amplifier or as a means of producing two signals with a fixed frequency difference. In most cases the modulation frequency f_m is made high enough so that a sideband can be separated from the carrier frequency f_c by the selectivity of the high-Q output resonator. The problem is to vary the entire

electron gun structure, which is at a high d-c voltage above ground, at an r-f rate. Since r-f chokes for the heater leads are not too practical, the scheme illustrated for including the three klystron leads as part of the plate tank circuit has been devised. The klystron leads are wound with the same number of turns as an integral part of the tank coil but insulated adequately for the cathode voltage on the klystron. The r-f circuit must be kept close to the klystron socket

Reflex klystron oscillators are well suited to automatic frequency control in f-m systems because the d-c voltage of the discriminator can be applied to the reflector electrode to control the frequency of the local oscillator. The r-f voltage supply in this circuit is derived from a selenium rectifier so a common grounded lead can be connected to the cathode of a type 723 similar reflex klystron local oscillator. Two VR-tube regulators in series provide adequate voltage stability for this application. The output of the f-m discriminator is connected to the grid of a buffer amplifier which controls the reflector voltage. The 2,000-ohm and 75-ohm variable resistors in the cathode lead act as coarse and fine controls of the average reflector voltage



VHF FIELD INTENSITIES

Nomograph shows fields in microvolts per meter for transmitter powers up to 500 watts, antennas up to 500 feet, over obstructions as high as 10,000 feet in the frequency range between 20 and 260 mc

By E. A. SLUSSER

IN PLANNING a new vhf point-to-point radio circuit, it is first necessary to make some estimate of the expected transmission between the two points in question in order to determine the feasibility of such a circuit.

Likewise, in planning a new vhf mobile system the expected coverage over flat land and into shadowed areas must be predetermined. These estimated transmission figures can be used to assist in the selection of equip-

ment and location of transmitter sites. Such estimates are usually made by means of profile maps and transmission nomographs.

Previous nomographs for estimating field intensities in the vhf frequency range have been made for small segments only of the total band of frequencies, thus necessitating several charts to cover the entire band. This nomograph enables one to select a given frequency in the range between 20 and 260 mc and estimate the field intensity for either transmission over smooth land or transmission over paths involving shadow losses. It assumes either horizontal or vertical polarization over land and horizontal polarization over sea water. It also assumes 50-watt transmitters and half-wave antennas elevated 40 feet above the ground, but supplementary conversion data is given for other powers and antenna heights.

To use the nomograph, it is necessary to draw an elevation profile of the intervening terrain between the two proposed station sites. An example is shown in Fig. 1. A triangle is constructed by drawing two lines from the station sites, X and Y, each tangent to the nearest hill or obstruction that blocks the line-of-sight path. A base line is also drawn to intersect the two sites, and a vertical line is drawn through the apex of the triangle and intersecting the base line.

The information taken from this figure includes: D_1 , which is always the shortest distance in miles from one of the station sites to the vertical line; H , which is the height in feet along the vertical line between the apex of the triangle and the intersection of the base line; and the total transmission distance D . This information, along with a given frequency F in the vhf range, can be applied to the nomograph. The steps follow:

(1) A point on graph 1 is

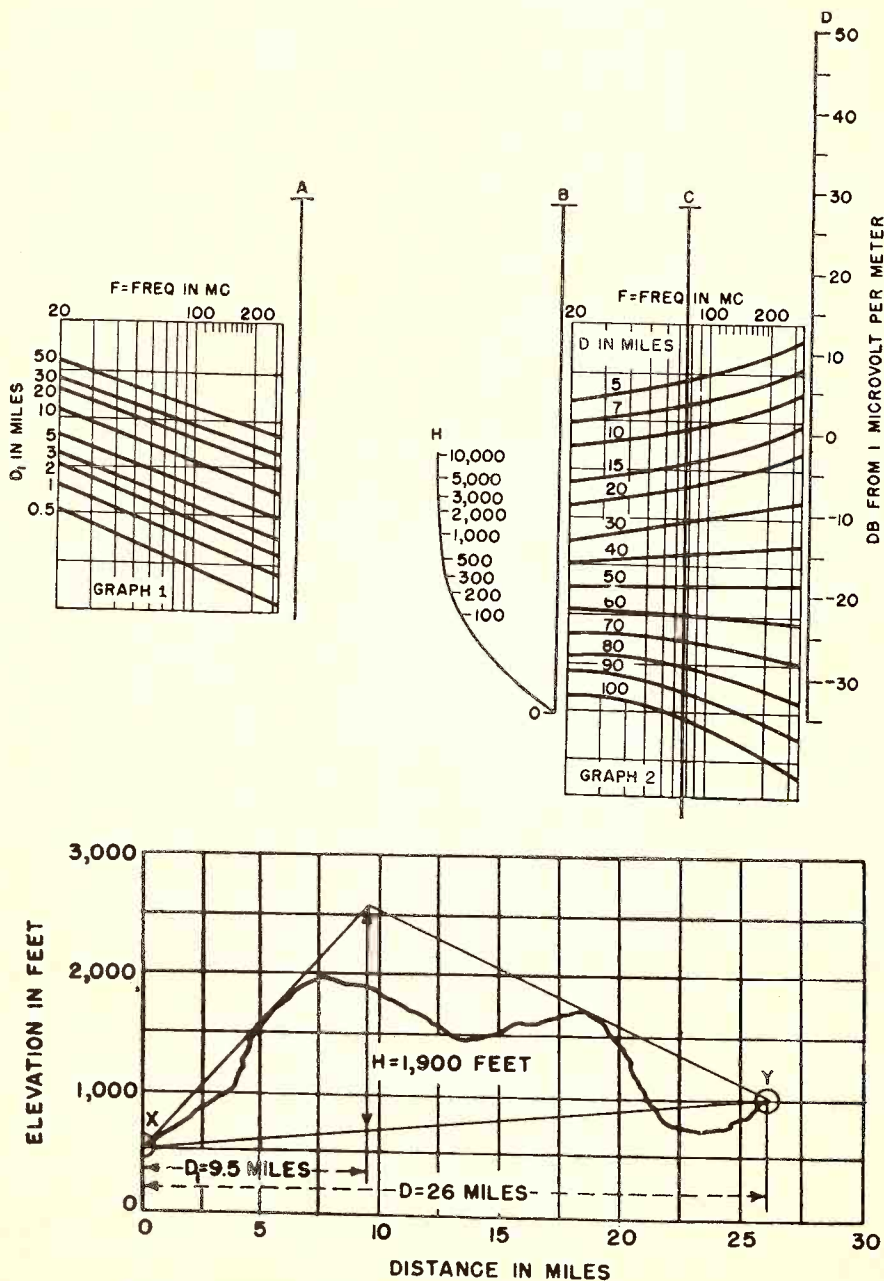


FIG. 1—Sample elevation profile used with nomograph

ed representing (F, D), this point is projected horizontally to a point on scale A. H is determined and a line is constructed through H to the point on scale A. This line intersects B at some point.

A point representing the frequency and the total distance (D) is determined on graph and this point is projected vertically to scale C.

A line is constructed passing through the points on scales C and intersecting scale D.

The estimated field intensity in db, referred to one microvolt per meter, is taken at the point where this line intersects scale D.

For estimating field intensity on smooth land, scale A is not used and H is taken as being

the transmission estimates by use of this nomograph based on standard conditions. The data that are obtained are in general agreement with the data for smooth or moun-

tainous terrain. The factors affecting vhf transmission are both natural (such as meteorological effects, type of soil and surrounding vegetation) and artificial (for example, antenna height, antenna gain, transmitter power and transmission-line loss). The latter items can be taken into consideration when making an estimate and a new equivalent field intensity (equivalent on the basis of a half-wave antenna) can be found.

A sample calculation can be made between locations X and Y by using the profile given in Fig. 1. Assume the following: at the transmitter end a 100-watt 150-mc transmitter using a three-element parasitic antenna having a gain of 6 db mounted on a 90-foot pole; on the receiving end another three-element 6-db-gain antenna mounted on a 30-foot pole; a combined transmission-line loss of 3 db at both ends. The answer is +14.5 db.

By comparing the estimated data with the receiver input level

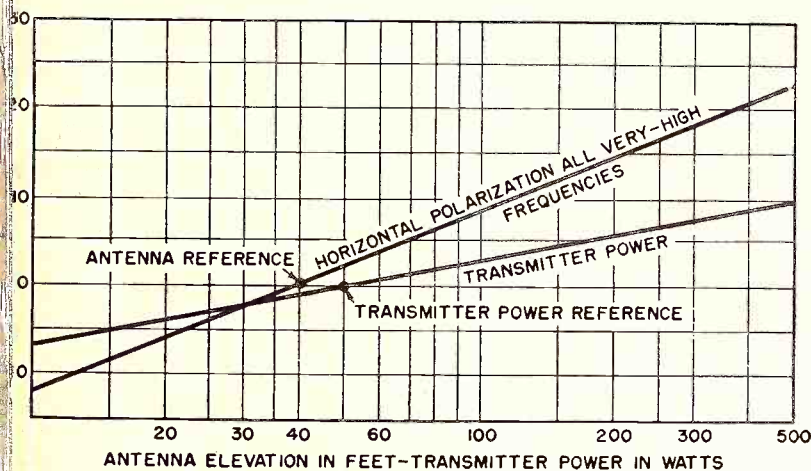


Fig. 2—Conversion graph for antenna elevation and transmitter power

I—Expected Circuit Performance With Average Receiver

Frequency Range in Mc	Equivalent estimated field intensity in db referred to $1\mu\text{V}$ per meter		
	Probably Unsatisfactory	Questionable	Probably Satisfactory
20-40	< -5db	-5 to +5db	> +5db
40-70	< 0	0 to +10	> +10
70-100	< +5	+5 to +15	> +15
100-120	< +10	+10 to +15	> +15
120-160	< +10	+10 to +20	> +20
160-220	< +15	+15 to +20	> +20
220-260	< +15	+15 to +25	> +25

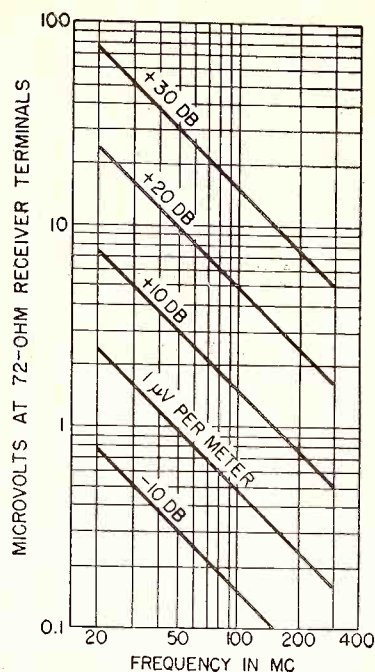


FIG. 3—Conversion graph for receiver input voltage

requirements one can determine whether or not the circuit will be probably satisfactory. For the average receiver the performance can be taken from Table I.

In making the above comparison one must take into consideration the amount of man-made noise present in the receiver area. The above figures are based on average noise conditions but in extremely noisy areas it may be necessary to increase the figures by about 20 db.

In order to compare the above data with receiver sensitivity, it may be desirable to convert field intensity, which is given in terms of db above one microvolt per meter, to microvolts appearing at the receiver terminals. This can be done by means of Fig. 3. This figure assumes a half-wave antenna connected to the receiver terminals (72 ohms input) by means of a zero-loss transmission line. The voltage (for half-wave antennas) appearing on the receiver terminals is $0.32LE$ where L is the length of the antenna in meters and E the field intensity in microvolts per meter.

For the previous example, +14.5 db equivalent field intensity at 150 mc corresponds to approximately 1.7 microvolts at the receiver terminals.

HIGH-PASS, LOW-PASS and BAND-PASS

Rearrangement of equations and accompanying charts permit design of multi-section filters with only two or at most three settings of a reactance slide rule. Filter component values are specified as functions of midband frequency and terminating impedance

By G. J. MERCHANT

MUCH of the drudgery in designing high-pass and low-pass filters for audio frequencies may be eliminated by the simple expedient described here.

The formulas for L and C in a single constant- k high-pass T-section are $L = R/4\pi f_0$ and $C = 1/\pi f_0 R$ where f_0 is the cut-

off frequency and R is the terminating resistance. A simple rearrangement of these expressions gives $2\pi(f_0/R)L = \frac{1}{2}$ and $1/2\pi(f_0 R)C = 1$, or, in other words, L is the inductance whose reactance at the frequency f_0/R is equal to $\frac{1}{2}$ ohm, and in a similar manner C is the capacitance whose reactance at the frequency

$f_0 R$ is found to be equal to 1 ohm.

The method can be extended to other types of sections, and a multisection filter can be designed with only two settings of a reactance slide rule, once at f_0/R for the inductances and once at $f_0 R$ for the capacitances. In multisection filters the sharpest cutoff consistent with high attenuation outside the pass band is realized by using terminating m -derived half-sections with $m = 0.6$, a full m -derived section with $m = 0.8$, and one or more constant- k sections.

Figure 1 gives the values of the reactances in ohms in such sections, the coils being evaluated at f_0/R and the capacitors at $f_0 R$.

For example, to design a three-section low-pass filter of T-sections with $R = 500$ ohms and $f_0 = 1,000$ cps, find on the slide rule that $f_0/r = 1,000/500$ or 2 cps. Also on the slide rule, find the inductance whose reactance at 2 cps is the value given in Fig. 1. Then determine $f_0 R$ to be $1,000 \times 500$ or 500 kc and find the capacitance whose reactance at 500 kc is the value given in Fig. 1. The complete filter and its attenuation characteristic are given in sections A and B of Fig. 2.

Low-pass or high-pass filters can be completely specified in terms of two quantities, the cutoff frequency and the terminating impedance. Band-pass filters introduce an additional

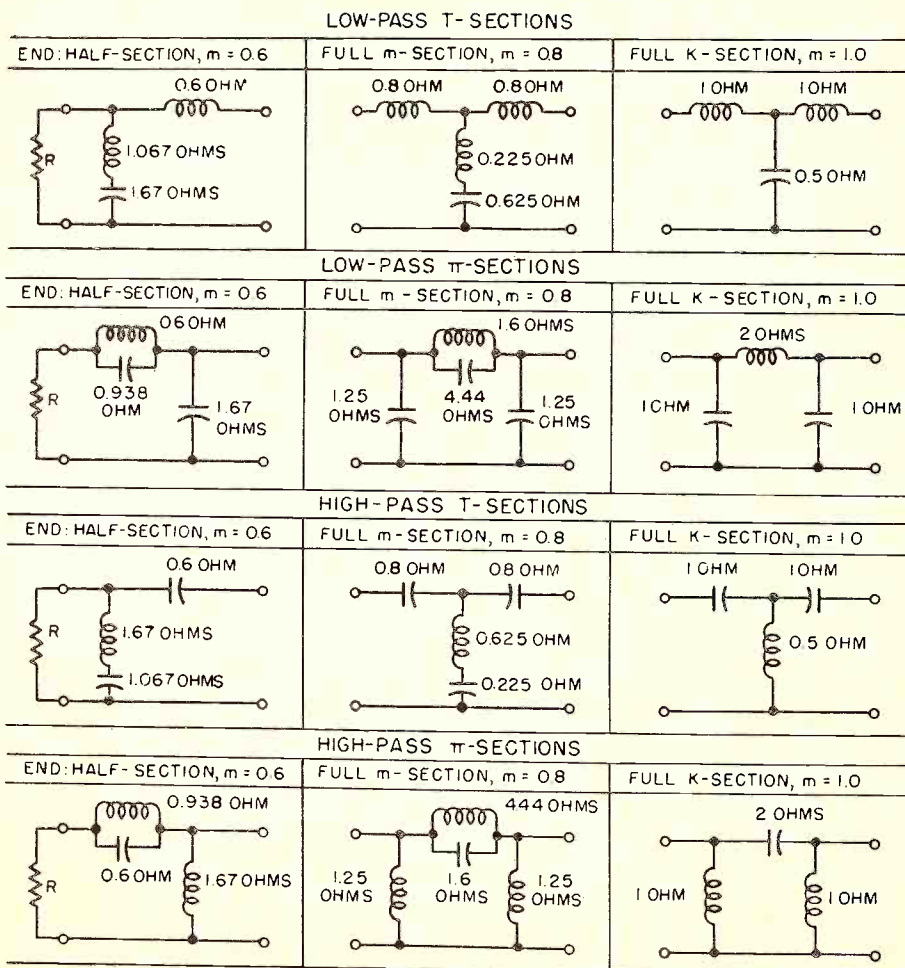


FIG. 1—Generalized impedance chart from which impedances are calculated by reactance slide rule if terminating impedance and cutoff frequency are given

FILTER DESIGN

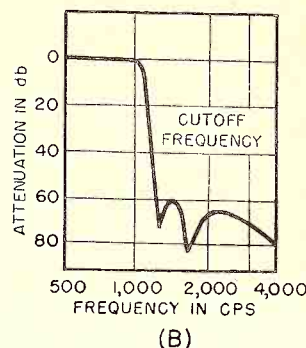
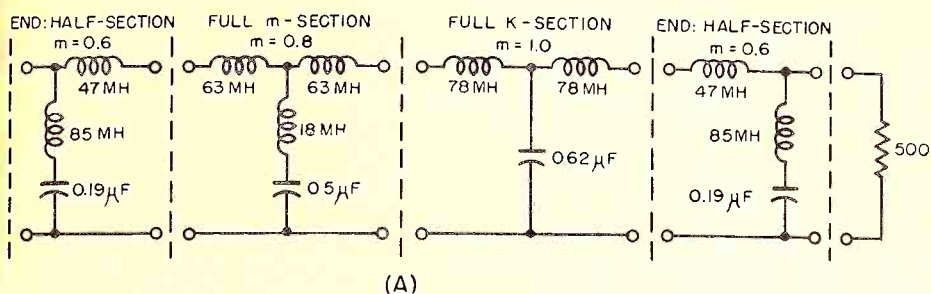


FIG. 2—Illustrative filter design values and attenuation characteristics of low-pass filter designed by use of Fig. 1

ty, the bandwidth, and more require three quantities to specify their performance but their calculation can be simplified by means of the technique used for low and high-pass

charts* in Fig. 3 give the impedance constants, in ohms, and π band-pass sections in terms of the terminating impedance R , the upper cutoff frequency f_2 , and the midband frequency f_m , which is the geometric mean of the upper and lower cutoff frequencies and is given by $f_m = \sqrt{f_1 f_2}$.

For example, to design a π band-pass filter of π -sections with upper and lower cutoff frequencies at 770 cps and 1,300 cps and terminated in 1,000 ohms, first find $f_m = \sqrt{770 \times 1,300} = 1,000$ cps. Then find $f_2/f_m = 1,300/1,000 = 1.30$. Then find $f_1/f_m = 770/1,000 = 0.77$, and the inductances whose reactance in ohms at 1 cps are the values given on the chart opposite $f_2/f_m = 1.30$. Then find $X_L = 1,000 \times 1.30 = 1,300$ ohms and the capacitances in like units.

When f_2/f_m is greater than 1.0, the filter can be more economically designed by cascading π and T high-pass sections whose passbands overlap. In specifying values for the filter design, elements appearing directly in parallel or in series after cascading should be indicated.

BAND-PASS: T-SECTIONS

(f_2/f_m)	END: HALF-SECTION, $m = 0.6$						FULL m-SECTION, $m = 0.8$						FULL K-SECTION, $m = 1.0$			
	X_L at $f = f_m/R$			X_C at $f = f_m R$			X_L at $f = f_m/R$			X_C at $f = f_m R$			X_L at $f = f_m/R$		X_C at $f = f_m R$	
	L_1	L_2	L_3	C_1	C_2	C_3	L_1	L_2	L_3	C_1	C_2	C_3	L_1	L_2	C_1	C_2
1.05	6.12	20.4	22.1	6.12	22.1	20.4	8.15	4.23	4.98	8.15	4.98	4.23	10.2	0.049	10.2	0.049
1.10	3.16	9.87	12.7	3.16	12.7	9.87	4.21	2.04	2.78	4.21	2.78	2.04	5.26	0.095	5.26	0.095
1.15	2.14	6.49	9.20	2.14	9.20	6.49	2.86	1.31	2.04	2.86	2.04	1.31	3.57	0.140	3.57	0.140
1.20	1.63	4.72	7.40	1.63	7.40	4.72	2.17	0.935	1.73	2.17	1.73	0.935	2.72	0.183	2.72	0.183
1.25	1.33	3.70	6.48	1.33	6.48	3.70	1.78	0.736	1.53	1.78	1.53	0.736	2.22	0.225	2.22	0.225
1.30	1.11	3.03	5.80	1.11	5.80	3.03	1.48	0.588	1.41	1.48	1.41	0.588	1.88	0.265	1.88	0.265
1.35	0.984	2.56	5.42	0.984	5.42	2.56	1.31	0.506	1.34	1.31	1.34	0.506	1.64	0.304	1.64	0.304
1.40	0.876	2.22	5.12	0.876	5.12	2.22	1.17	0.438	1.30	1.17	1.30	0.438	1.46	0.342	1.46	0.342
1.45	0.792	1.96	4.95	0.792	4.95	1.96	1.06	0.385	1.27	1.06	1.27	0.385	1.32	0.380	1.32	0.380
1.50	0.720	1.75	4.71	0.720	4.71	1.75	0.96	0.340	1.25	0.96	1.25	0.340	1.20	0.417	1.20	0.417

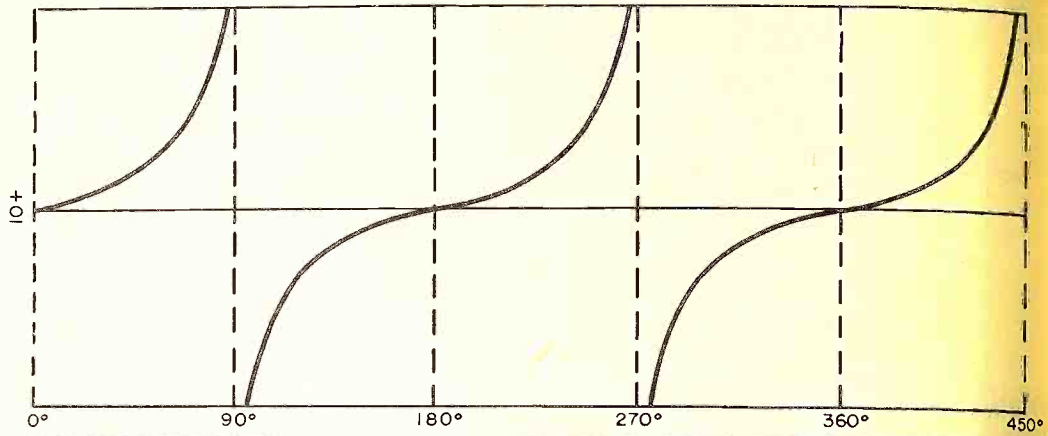
BAND-PASS: TT-SECTIONS

(f_2/f_m)	END: HALF-SECTION, $m = 0.6$						FULL m-SECTION, $m = 0.8$						FULL K-SECTION, $m = 1.0$			
	X_L at $f = f_m/R$			X_C at $f = f_m R$			X_L at $f = f_m/R$			X_C at $f = f_m R$			X_L at $f = f_m/R$		X_C at $f = f_m R$	
	L_1	L_2	L_3	C_1	C_2	C_3	L_1	L_2	L_3	C_1	C_2	C_3	L_1	L_2	C_1	C_2
1.05	0.045	0.049	0.163	0.049	0.045	0.163	0.236	0.201	0.123	0.201	0.236	0.123	20.4	0.098	20.4	0.098
1.10	0.079	0.101	0.316	0.101	0.079	0.316	0.490	0.360	0.238	0.360	0.490	0.238	10.5	0.190	10.5	0.190
1.15	0.109	0.154	0.467	0.154	0.109	0.467	0.763	0.490	0.350	0.490	0.763	0.350	7.14	0.280	7.14	0.280
1.20	0.135	0.212	0.613	0.212	0.135	0.613	1.07	0.578	0.461	0.578	1.07	0.461	5.44	0.367	5.44	0.367
1.25	0.154	0.270	0.750	0.270	0.154	0.750	1.36	0.653	0.562	0.653	1.36	0.562	4.44	0.450	4.44	0.450
1.30	0.172	0.330	0.900	0.330	0.172	0.900	1.70	0.709	0.675	0.709	1.70	0.675	3.76	0.531	3.76	0.531
1.35	0.184	0.391	1.02	0.391	0.184	1.02	1.98	0.746	0.763	0.746	1.98	0.763	3.28	0.609	3.28	0.609
1.40	0.195	0.450	1.14	0.450	0.195	1.14	2.28	0.769	0.855	0.769	2.28	0.855	2.92	0.685	2.92	0.685
1.45	0.202	0.510	1.26	0.510	0.202	1.26	2.60	0.787	0.943	0.787	2.60	0.943	2.64	0.760	2.64	0.760
1.50	0.212	0.572	1.39	0.572	0.212	1.39	2.94	0.800	1.04	0.800	2.94	1.04	2.40	0.834	2.40	0.834

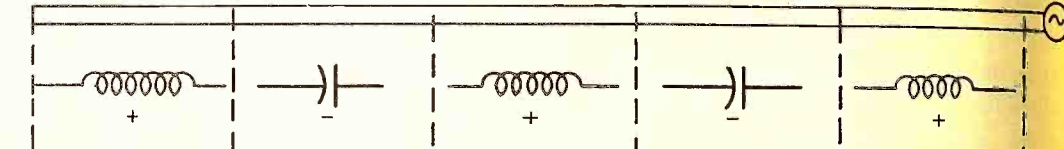
FIG. 3—Generalized impedance tables from which filter impedances are quickly calculated if the upper cutoff frequency, midband frequency and terminating impedance of a band-pass filter are all known. These dimensionless impedance tables are obtained by specifying filter component values as functions of midband frequency and terminating impedance for various values of the ratio of upper to midband frequency

CHARACTERISTICS OF RESONANT

TANGENT CURVES INDICATING REACTANCE OF LINE



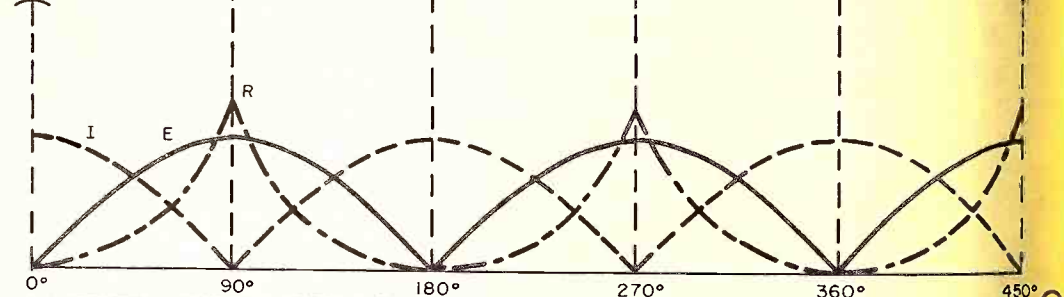
REACTANCE CHARACTERISTIC FOR EACH 90-DEG SECTION OF LINE



RESONANT PROPERTIES FOR LINE OF EXACT QUARTER-WAVE INTERVALS. LINE ACTS LIKE ALTERNATE SERIES AND PARALLEL RESONANT CIRCUITS

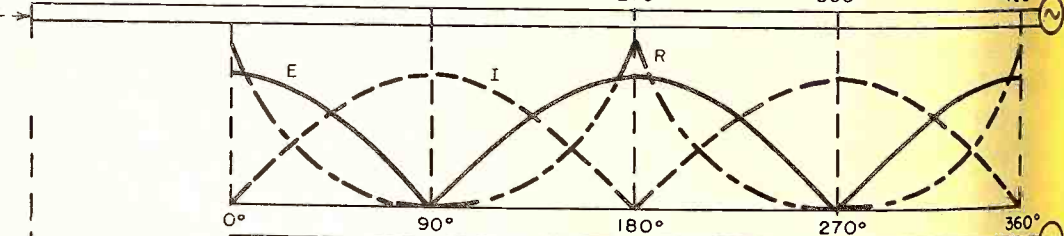


RESISTANCE AND VOLTAGE AND CURRENT DISTRIBUTION ALONG LINE SHORTED AT FAR END



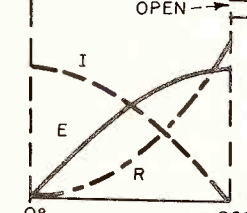
SHORTED

RESISTANCE AND VOLTAGE AND CURRENT DISTRIBUTION ALONG LINE OPEN AT FAR END



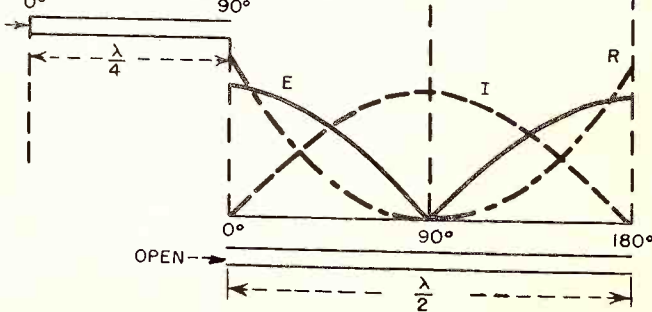
OPEN

RESISTANCE AND VOLTAGE AND CURRENT DISTRIBUTION ALONG QUARTER-WAVE LINE SHORTED AT FAR END



SHORTED

RESISTANCE AND VOLTAGE AND CURRENT DISTRIBUTION ALONG HALF-WAVE LINE OPEN AT FAR END



OPEN

TRANSMISSION LINES

oltage, current and resistance along ideal or low-loss resonant lines are conveniently portrayed, together with equivalent resonant circuit at quarter-wave sections and reactance for other lengths of open or shorted lines

THE important part which transmission lines play in modern radio communication makes it useful to have available in compact form for ready reference a graphical interpretation of the behavior of such lines. For simplicity of presentation, the curves and diagrams have been plotted on the assumption that the lines are free from loss. The presence of a slight amount of attenuation will not appreciably affect the general shape of the curves, and hence the diagrams are useful for practical applications as well as for the ideal loss-free case. If the line has appreciable attenuation, however, the curves shown here must be modified slightly to apply to actual condi-

tion. In drawing the curves, the line is assumed to be fed from a generator whose output impedance is equal to the characteristic impedance of the line. With this assumption, the wave is absorbed and dissipated and is not reflected from the sending end. The curves are drawn for lines whose distant ends are open or shorted, corresponding to infinite and zero resistance termination at the far end.

The data for which the curves have been compiled are available at a glance. For example, the length of line required to give a high impedance, a low impedance, an inductive reactance or a capacitive reactance is directly evident.

Starting from top to bottom, the chart shows the following information for transmission lines:

1. *Reactance curves for lines of various lengths.* While the curves shown apply for lines whose length is one wavelength or less,

the curves are periodically repetitive, and hence may be extended to lines of any length. For lines longer than one wavelength, it is convenient to determine the line characteristics by subtracting an integral number of wavelengths from the line. The remaining length of line will then be less than one wave in length, and its characteristics may then be determined from the graphs.

The electrical equivalent reactance for lines of various lengths between exact multiples of a quarterwave line. When the reactance curve is positive, the electrical equivalent reactance is inductive, whereas it is capacitive for lines of such length that the reactance curve is negative. The ideal line, free from attenuation, behaves either as a pure inductive reactance or as a pure capacitive reactance within any given quarterwave section. Actual lines, in which some attenuation is present, will also show a resistive component as well as the reactive component, but this is not indicated on the diagram.

The resonant circuit characteristics of the line at exactly each quarter wavelength. The ideal line behaves as a series resonant circuit and as a parallel resonant circuit alternately every quarter of a wave long. In the ideal case the line has zero resistance when the series resonant circuit is used to represent it, and has infinite impedance for those quarter-wavelengths for which it behaves as a parallel resonant circuit. Actu-

ally, real physical lines have more than zero and less than infinite resistance at these points. The line is resonant at 90-degree intervals for both open and shorted cases, and for quarter-wave intervals the line behaves alternately as a series and as a parallel resonant circuit.

The resistance and the voltage and current distribution for open and shorted lines. For convenience the resistance curve is plotted along with the voltage and current distribution along the length.

For the shorted line, the graphs show that, as measured from the shorted end, the line acts first as an inductance for the first quarter-wave section, then as a capacitance for the next quarter-wave section, and so on, alternately for each 90-degree interval.

For the open-end line, the graph shows that, as measured from the open end, the line acts first as a capacitance and then as an inductance, alternately, for each quarter-wave section.

The quarter-wave diagram near the bottom of the charts show that a quarter-wave section of line may be considered as a tuned circuit. If the line is slightly less than a quarter-wave, it will present inductive reactance, whereas if it is slightly longer than a quarter-wave, the section will assume the characteristics of a capacitance.

In a similar manner, the lowest diagram shows that a half-wave line may be considered as a tuned circuit element. If the line is slightly less than a half-wave long, its reactance will be inductive, whereas the reactance will be capacitive if the line is slightly longer than a half-wave.

By J. B. EPPERSON

TEN R-F TRANSMISSION LINE

Ten equations commonly used to compute relationships between electrical and mechanical properties of radio-frequency transmission lines have been converted to convenient nomographs covering both two-wire and coaxial lines for frequencies up to 20,000 mc

By PHILLIP H. SMITH

TEN of the most useful transmission-line equations have been plotted as nomographs as a convenience to the radio engineer. The derivation of the formulas is based upon certain simplifying assumptions which are generally considered justifiable for r-f lines.

1. *Characteristic Impedance of Transmission Lines.* For radio-frequency transmission lines where the losses per wavelength are relatively small, the characteristic impedance is essentially a pure resistance. The characteristic impedance is numerically equal to the square root of the ratio of the distributed inductance to the distributed capacitance per unit length. Since both of these parameters are uniquely related to the physical size and spacing of the conductors, it is possible to express the characteristic impedance in terms of the physical dimensions of the line.

Thus, the characteristic impedance Z_0 in ohms of an open 2-wire line is

$$Z_0 = 276 \log_{10} (2D/d) \quad (1)$$

where D is the wire separation on centers and d is the wire diameter, both in the same units. Figure 1 shows the characteristic impedance of an open 2-wire line as a function of the conductor dimensions and their center-line spacing.

2. *Characteristic Impedance of a Coaxial Line.* The characteristic impedance Z_0 in ohms of a coaxial transmission line is

$$Z_0 = 138 \log_{10} (D/d) \quad (2)$$

where D is the inner diameter of

the outer conductor and d is the outer diameter of the inner conductor. This applies only to a line where the medium between conductors is predominantly a gas, such as air, at low pressures.

If the coax line is filled with a uniform dielectric material other than a low-pressure gas, the characteristic impedance is reduced by a factor equal to $1/k^2$, where k is the relative dielectric constant of the material. For a line with bead insulators at small uniform intervals, the

effective dielectric constant k_e may be computed from

$$k_e = (k t + s)/(t + s) \quad (2a)$$

where t is the thickness of one bead and s is the spacing between two beads, both t and s being in the same units, and k is the relative dielectric constant of the bead.

A number of optimum values for the characteristic impedance of coaxial lines exist which are based upon different considerations such as the maximum power handling capability and

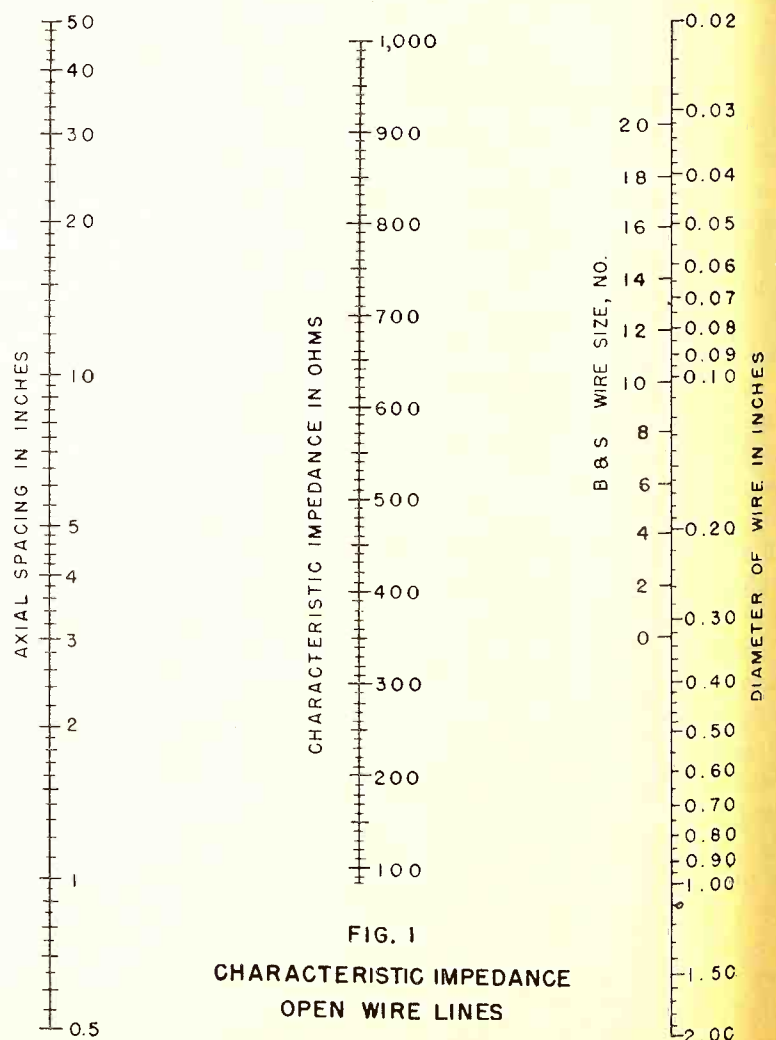


FIG. 1
CHARACTERISTIC IMPEDANCE
OPEN WIRE LINES

NOMOGRAPHS

minimum loss. Several of optimum values are indicated along the characteristic impedance scale on the right side of the nomograph. Generally, all of these optimum values are relatively broad in characteristics and a considerable departure can generally be tolerated for any particular application.

Figure 2 shows the characteristic impedance of a gas dielectric coaxial transmission line as a function of the two conductor diameters.

High-Frequency Resistance of Coaxial Line. The high-frequency resistance of a coaxial transmission line is one of the principal factors which determine the attenuation along the line. It is also one of the factors which determine the maximum anti-resonant imped-

ance and the minimum resonant impedance of a line section when used as a circuit element. The high-frequency resistance of a coaxial line is a function of both conductor dimensions and of the frequency (due to skin effect). It is also a function of the resistivity of the material of which the conductors are made.

For copper coaxial lines the high-frequency loop resistance R in ohms per 1,000 feet is

$$R = 0.0315 f^{1/2} \left[\frac{1}{d} - \frac{1}{D} \right] \quad (3)$$

where f is the frequency in kilocycles, D is the inner diameter of the outer conductor in inches, and d is the outer diameter of the inner conductor in inches.

For conductors other than copper, the high-frequency resistance is proportional to the square root of the ratio of the

resistivity of the conductor to that of copper.

Figure 3 shows the resistance of a copper coaxial line as a function of the conductor dimensions and the frequency. Dielectric losses, which are negligible in a gas dielectric line, are not included.

The nomograph in Fig. 3 is used as follows: draw a straight line connecting points on the first and fourth scales from the left, which show, respectively, the line conductor diameters. Obtain the intersection of this line with the second scale, marked Size Factor. Now project this intersection to a corresponding point on the third scale, marked Pivot Line, as shown in the example on the nomograph. Finally, connect this new pivot point with a straight line intersecting the desired value on the sixth or frequency scale. The intersection of this latter straight line with the scale marked Resistance in ohms per 1,000 feet gives the desired loop resistance value.

4. *Conversion of Loss Resistance to Decibels Attenuation per Unit Length.* It is sometimes convenient to convert loop resistance of a transmission line (as obtained from Fig. 3) to decibels (db) per unit length. This may be done if the characteristic impedance of the line is known. The conversion equation is simply

$$\text{db} = R/0.23025 Z_0 \quad (4)$$

where R is the loop resistance and Z_0 is the characteristic impedance. This relationship is plotted on the nomograph of Fig. 4. The nomograph applies to either open-wire or coaxial lines and does not require the line conductors to be of copper.

5. *Antiresonant Impedance of a Transmission Line Section.* The antiresonant impedance Z_{AR} of a transmission line section either open or short-circuited at its far end is a function of the

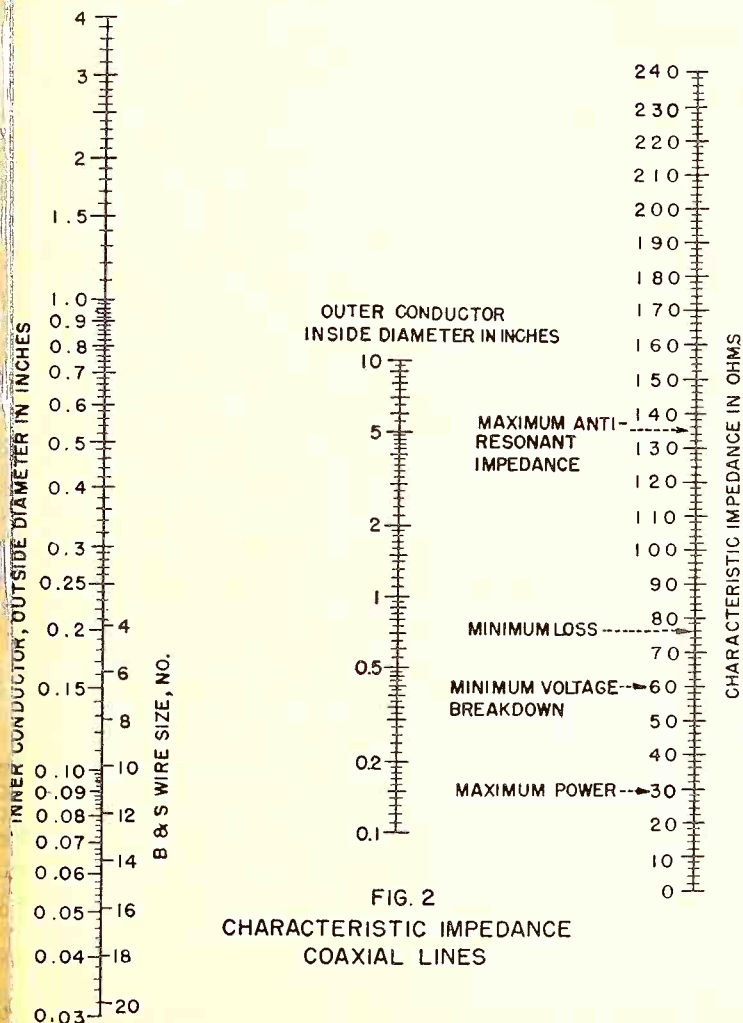


FIG. 2
CHARACTERISTIC IMPEDANCE
COAXIAL LINES

Ten R-F Transmission Line Nomographs (continued)

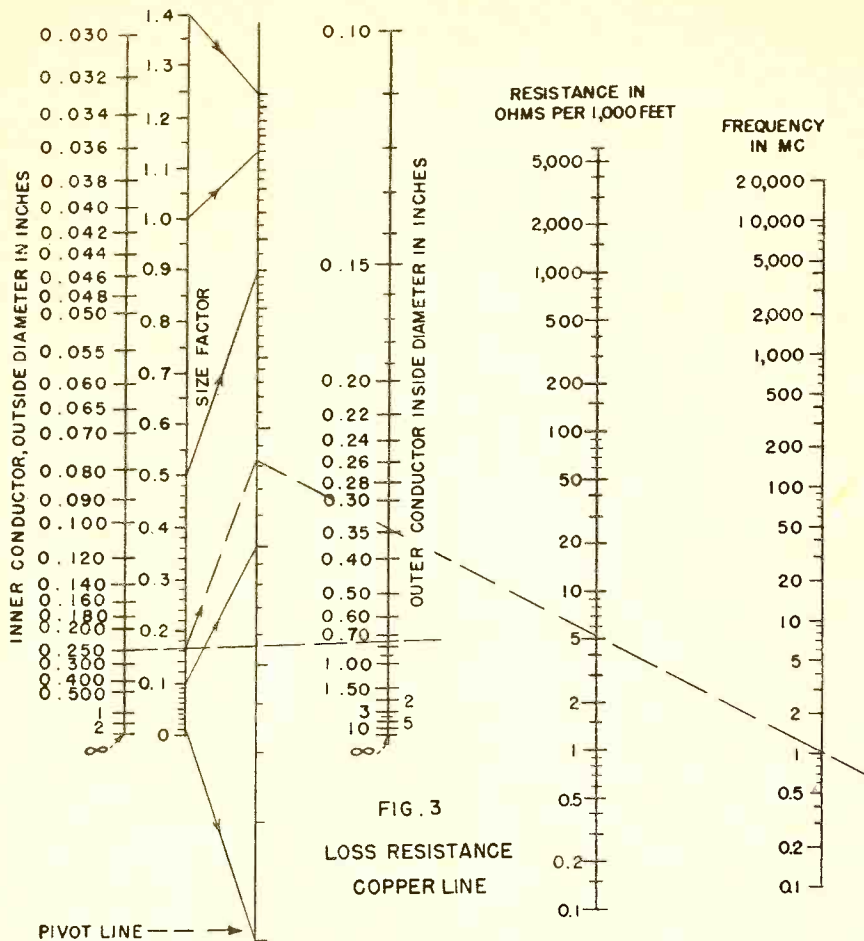


FIG. 3
LOSS RESISTANCE
COPPER LINE

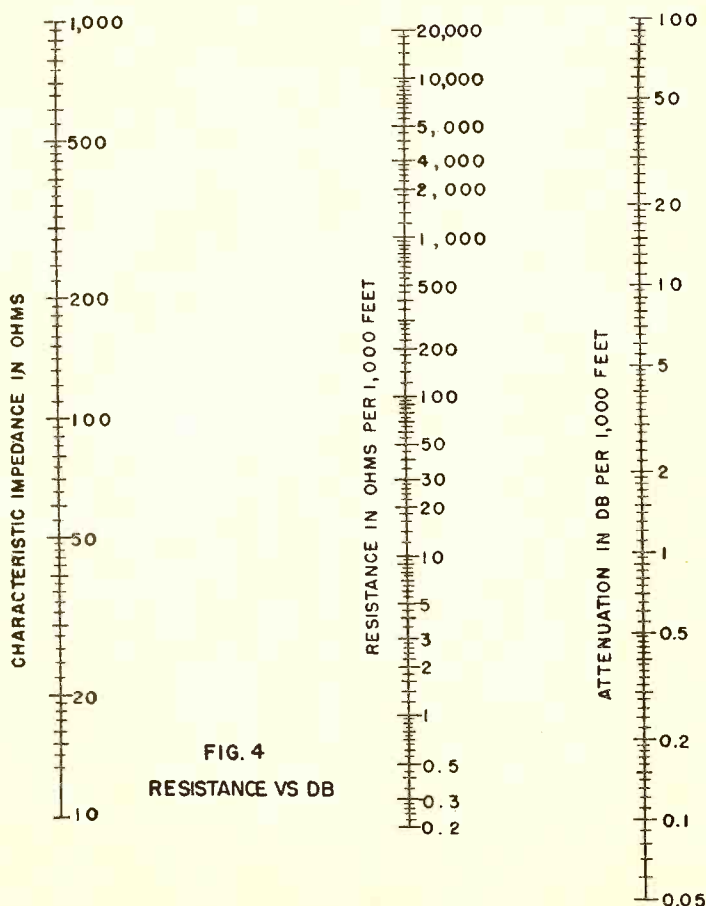


FIG. 4
RESISTANCE VS DB

total conductor resistance and the characteristic impedance of the section. The relationship is

$$Z_{AR} = 2 Z_0^2 / R \quad (5)$$

where Z_0 is the characteristic impedance and R is the resistance of the antiresonant line section.

The shortest antiresonant line section is one-quarter wavelength long (short-circuited at its far end) and accordingly this will have the highest antiresonant impedance. A line section one-half wavelength long (open-circuited at the far end) will have only half as high an antiresonant impedance because its resistance R is twice as great.

Figure 5 shows the antiresonant impedance of a transmission line as a function of the total resistance and the characteristic impedance of the section. The nomograph applies equally to either coaxial or open-wire lines.

The resonant impedance of a transmission-line section is simply one-half of its total resistance (obtained from Fig. 3); accordingly, no nomograph has been plotted for this.

6. Input Reactance of a Transmission-Line Section. A short length of transmission line is sometimes used as a reactance element in high-frequency circuits. The input reactance is a function of the electrical length of the line section and its characteristic impedance. The reactance varies between values essentially equivalent to plus and minus one half of the antiresonant impedance (obtained from Fig. 5). In air or gas dielectric coaxial lines, the electrical length is very nearly the same as the physical length measured in terms of free space wavelengths. A dielectric other than a gas results in a reduction in the length of the wave in the line which is proportional to the square root of the average dielectric constant. Thus a polyethylene coaxial cable with a dielectric constant of 2.5 will be electrically $(2.5)^{1/2}$ or 1.6 times as long as if the dielectric were a gas.

The electrical length and the characteristic impedance of a section as well as its termination (either open circuit or short circuit) determine the magnitude and sign of the input impedance. For an open-wire or coaxial line section, open-circuited at its far end, the input impedance X_i in ohms is

$$X_i = -Z_0 \cot(360 l/\lambda) \quad (6)$$

where l/λ is the electrical length in wavelengths and Z_0 is the characteristic impedance.

For an open-wire or coaxial line section, short circuited at its far end, the input reactance X_i in ohms is

$$X_i = Z_0 \tan(360 l/\lambda) \quad (6a)$$

Figure 6 shows the input reactance of an open or short-circuited transmission-line section as a function of the electrical length, the characteristic impedance, and the termination.

Quarter-Wave Transmission-Line Impedance Transformers
Impedance transformers are made along radio-frequency transmission lines by employing a quarter-wave section of transmission line of selected characteristic impedance as an impedance transformer. When a line section is terminated in a pure resistance its input impedance will be a pure resistance and depends upon the load resistance value and the value of characteristic impedance of the quarter-wave line section.

Figure 7 shows the input reactance R_i in ohms of a quarter-wave open-wire or coaxial line terminated in a pure resistance load. The relationship is

$$R_i = Z_0^2/R_l \quad (7)$$

where R_l is the terminating resistance and Z_0 is the characteristic impedance.

Current-Phase Relationship in a Transmission Line. The relationship of the current point to point along a radio-frequency transmission line will be uniform with length when the line is terminated in an impedance equivalent to the characteristic impedance;

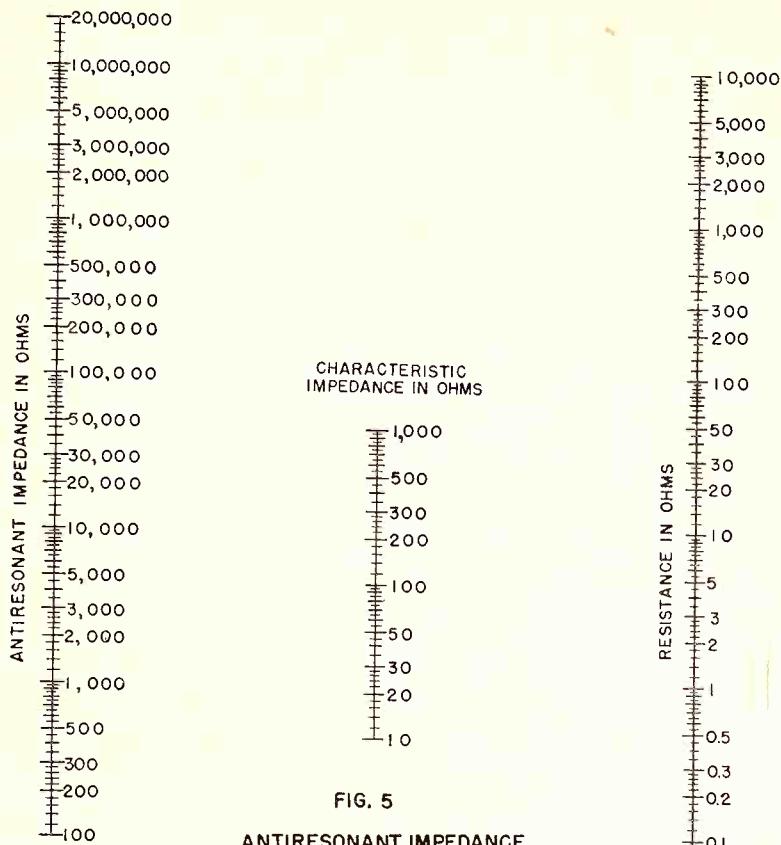


FIG. 5

ANTIRESONANT IMPEDANCE

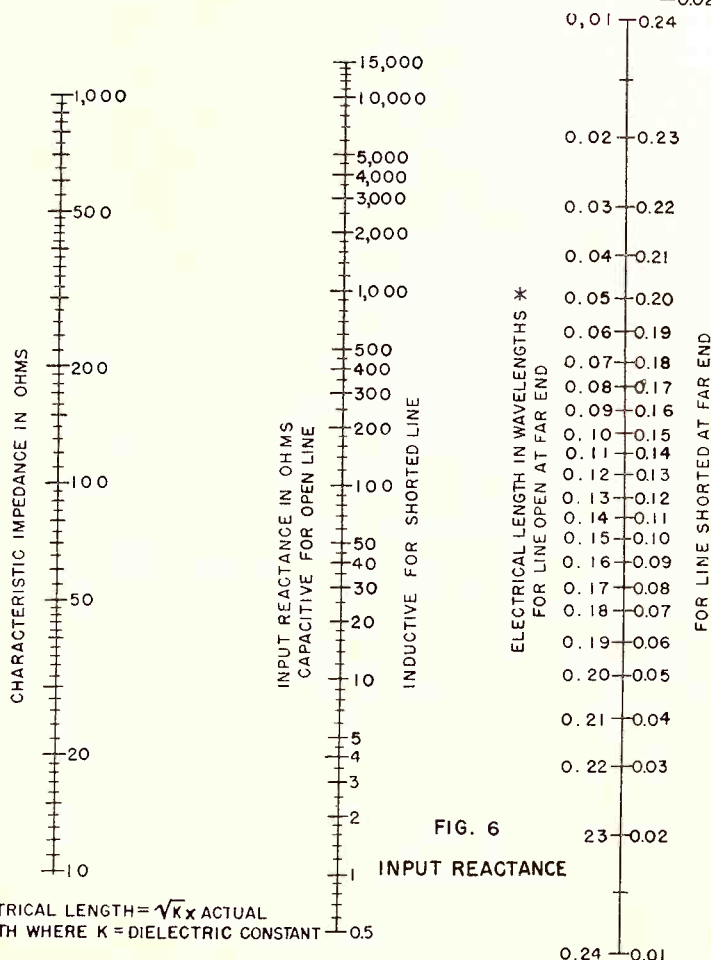


FIG. 6

INPUT REACTANCE

* ELECTRICAL LENGTH = $\sqrt{K} \times$ ACTUAL LENGTH WHERE K = DIELECTRIC CONSTANT

Ten R-F Transmission Line Nomographs (continued)

otherwise the phase will vary nonuniformly along the line.

Figure 8 shows the phase relationship of the current at the sending end of a line, with respect to the current in a resistance load, as a function of the ratio of the load resistance to the characteristic impedance of the line, and of the effective length of line. The relationship giving line length in degrees is

$$\phi = \arctan \left[\frac{R_l}{Z_0} \tan \left(360 \frac{l}{\lambda} \right) \right] \quad (8)$$

where R_l is the load resistance, Z_0 is the characteristic impedance and l/λ is the electrical length in wavelengths.

The current in the load will always lag the current at the sending end of a transmission line. It will undergo exactly 180 degrees of phase shift in each electrical halfwave length regardless of the ratio of the load resistance to the characteristic impedance.

9. Voltage Gradient along a Coaxial Line. In a coaxial transmission line the maximum voltage gradient occurs at the surface of the inner conductor. When this gradient exceeds the critical value of approximately 20,000 volts (rms) per cm, breakdown will occur in the form of either corona or arcover. If the characteristic impedance of the line is less than the optimum breakdown value of 60 ohms, arcover will occur without corona; if it is more than 60 ohms, corona will precede arcover.

Figure 9 shows the maximum voltage gradient G_{max} in rms volts per cm on a coaxial line as a function of the characteristic impedance of the line, the physical size of the inner conductor and the applied voltage. The relationship is

$$G_{max} = 47.2E/dZ_0 \quad (9)$$

where E is the applied rms voltage, d is the diameter of the inner conductor in inches, and Z_0 is the characteristic impedance.

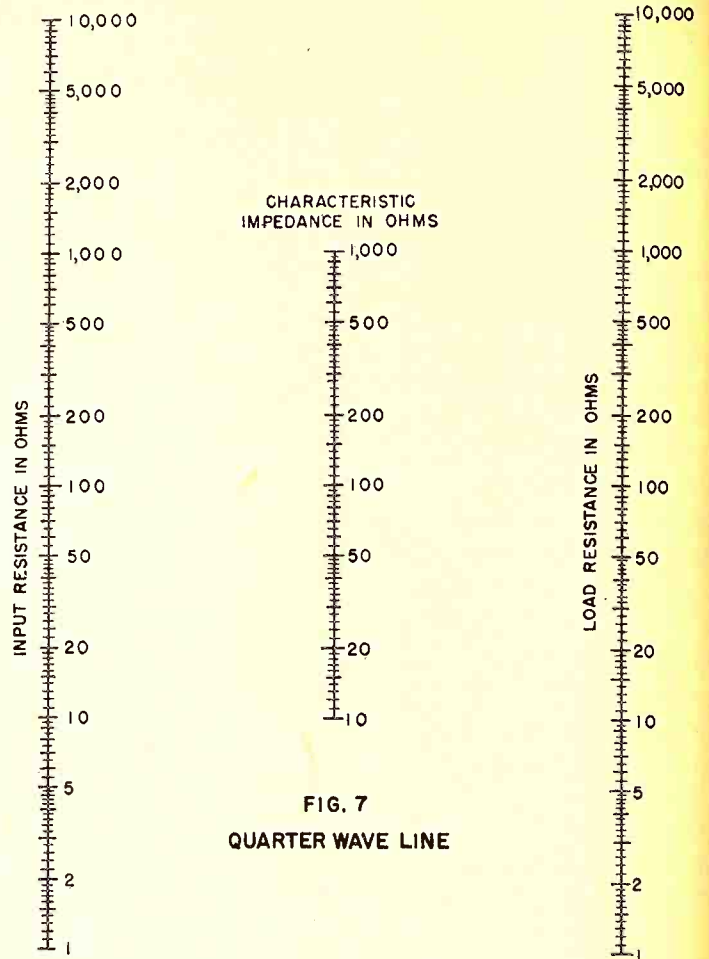
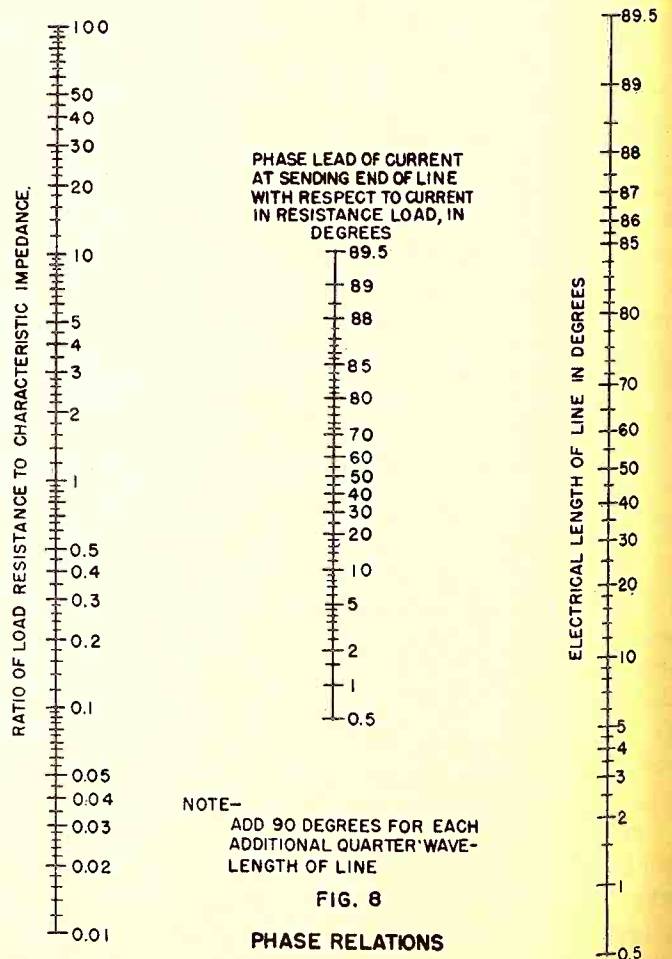


FIG. 7
QUARTER WAVE LINE



NOTE—
ADD 90 DEGREES FOR EACH
ADDITIONAL QUARTER WAVE-
LENGTH OF LINE

FIG. 8
PHASE RELATIONS

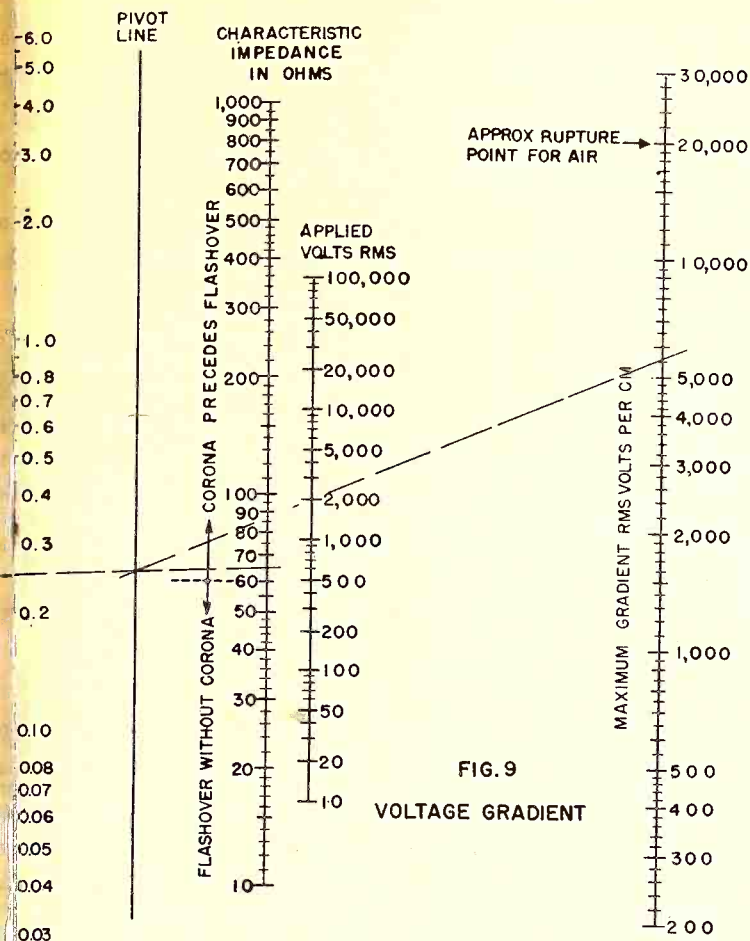


FIG. 9
VOLTAGE GRADIENT

This nomograph, Fig. 9, is used as follows: first, connect with a straight line points on the first and third scales from the left which represent the inner conductor diameter and the characteristic impedance (see example on nomograph). The intersection of this line with the second scale, labeled Pivot Line, is next connected with a second straight line passing through the desired point on the fourth scale, labeled Applied Volts RMS. The intersection of this second straight line with the fifth scale gives the desired value for the gradient on the surface of the inner conductor in rms volts per cm.

Bead insulators may cause higher gradients in their vicinity, resulting in premature voltage breakdown, particularly if they fit loosely on the inner conductor.

10. *Diminution of Standing-Wave Ratio Due to Line Loss.* A high-frequency transmission line whose characteristic impedance is not matched by the load impedance will have standing waves along its length. The standing-wave ratio in the vicinity of the load will be numerically equal to the ratio of the load resistance to the characteristic impedance (or its reciprocal if this is less than unity). If the line has attenuation, there will be a gradual diminution of the standing-wave ratio in the direction of the generator.

Figure 10 shows the relationship between the standing-wave ratio in a region near the generator (assuming that the wavelength is small compared to the line length), the standing-wave ratio near the load, and the line loss in decibels (as obtained from Fig. 3 and 4). The relationship is

$$db = \left[10 \log_{10} \frac{(S_L + 1)(S_G - 1)}{(S_L - 1)(S_G + 1)} \right]^{1/2} \quad (10)$$

where S_L is the voltage-standing-wave ratio near the load and S_G is the voltage standing wave ratio near the generator.

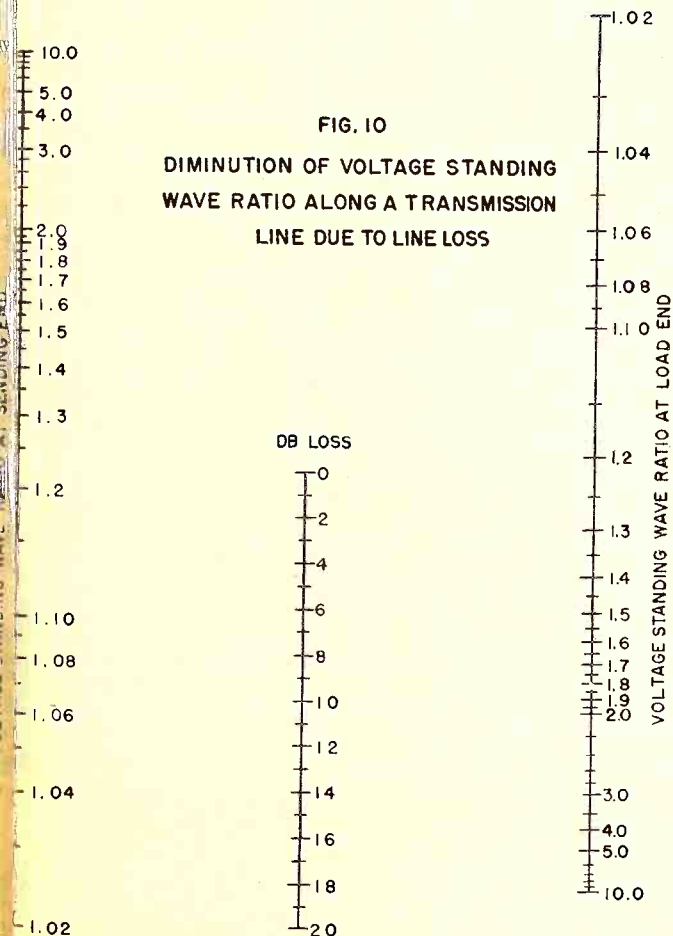


FIG. 10
DIMINUTION OF VOLTAGE STANDING
WAVE RATIO ALONG A TRANSMISSION
LINE DUE TO LINE LOSS

MIXER HARMONIC CHART

Chart speeds identification or prediction of spurious frequencies resulting from beating of various harmonic terms in mixer output when one input frequency is variable as in wide-band signals for tv, f-m and military communication

IN MANY APPLICATIONS involving the mixing of two frequencies to produce a third, a major difficulty often encountered is the generation of spurious frequencies by beating together of harmonics. When near coincidence with the required terms, these spurious frequencies cause audible modulation of the required frequency that cannot be removed by subsequent selective circuits.

When there are only two fixed frequencies, it is fairly simple to write down all the combination terms involved. If one of the input frequencies varies, however, a graphical method is to be preferred, as this enables the immediate identification or prediction of the various beats and facilitates the choice of frequency ratios free from modulation or spurious frequencies adjacent to the wanted terms.

It was in dealing with such a problem that the accompanying chart was devised. It is based on the fact that the expression for the value of any combination frequency is $F_o = mF_o \pm nF_x$, where m and n are the orders of the harmonics of the two frequency sources F_o and F_x respectively, F_x being the higher of the two frequencies.

To use this chart, trace upward from the ratio F_o/F_x of the two primary frequencies to the two primary frequencies to the heavy difference line $F_x - F_o$ or the heavy sum line $F_x + F_o$, depending on which output component is being used. From this intersection, trace up and down to the nearest slant lines; from each one, trace left to read the F_o/F_x value for that spurious combination frequency. Alternatively, the spurious frequencies can be figured from the identifying notations on the two near-

By **THOMAS T. BROWN**

est lines. Where intersections of two slant lines are nearest to the desired intersection, a beat audio modulation equal to the frequency difference will be produced.

Some problems may require the use of an expanded region of the chart showing higher combination terms. This may readily be constructed to any scale without plotting the whole curve from the origin. Assuming that the boundary limits of the required region are F_{o1}/F_x for the lower frequency limit and F_{o2}/F_x for the upper limit, the corresponding limits on the abscissa are F_{o1}/F_x and F_{o2}/F_x . Now

$$F_o = mF_o \pm nF_x \quad (1)$$

$$F_o/F_x = [(F_o/F_x) \mp n]/m \quad (2)$$

Substituting the four known boundary limits in Eq. 2 gives four equations involving m and n . Substituting for these the harmonic orders of the combination frequencies which it is desired to plot, two points are obtained which are connected by a straight line. This procedure is repeated for the main sum or difference frequency ($m = n = 1$) and other desired pairs.

A preliminary scrutiny of the structure of the general chart will be found helpful in quickly showing what order of combination frequencies are likely to be encountered in the particular region concerned.

Example of Use

In the design of a repeater station for a vhf relay, it is common practice to receive the trans-

mission at a given frequency and retransmit at a slightly higher or lower frequency to reduce feedback difficulties. Rather than convert the input to the output frequency directly, it is convenient to convert down to a lower intermediate frequency, which may then be amplified more easily and reconverted to the output frequency.

Assume an input frequency F_o of 250 mc with a 3-mc bandwidth, and a required output frequency of 240 mc. A convenient intermediate-frequency value for F_i would be in the order of 50 mc. The problem is to choose local oscillator frequencies that will avoid radiation of spurious frequencies and minimize intermodulation distortion.

Trying first 50 mc for F_o , the local oscillator value F_i becomes 200 mc and F_o/F_x for this is 0.8. Tracing upward, this is immediately seen to be a bad choice, because the desired main difference frequency line $F_x - F_o$ intersects both the $4F_o - 3F_x$ and $5F_x - 6F_o$ lines at this point.

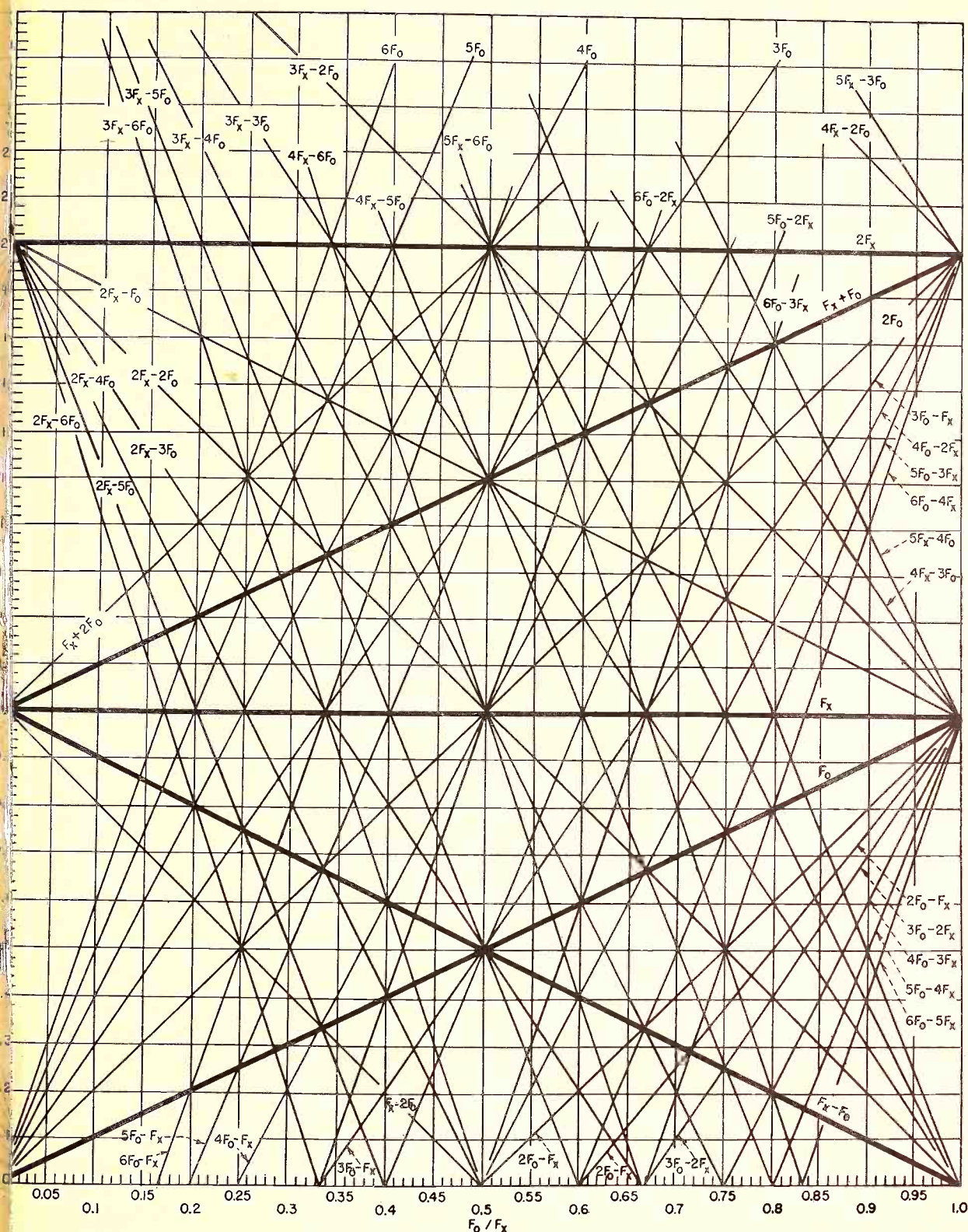
By inspection, the nearest value of F_o/F_x that it is in a clear space on the heavy $F_x - F_o$ line is 0.775, which corresponds to an i-f value of about 55 mc. Tracing vertically up and down from the intersection of the 0.775 ordinate with the $F_x - F_o$ line, we find that the nearest spurious frequencies occur at $F_o/F_x = 0.33$ and 0.12. Their values are quickly figured as $F_o = 0.33 \times 250 = 83.5$ mc and $F_o = 0.12 \times 250 = 30$ mc. If the bandwidth of F_o is 3 mc, these 83.5-mc and 30-mc beats will be easily filtered out of a 55-mc i-f system by the tuned circuits.

Now converting up again, let F_o be 55 mc and let F_i be the

and 240-mc output frequency, so that $F_s = 240 - 55 = 185$ mc, the frequency required of the second local oscillator to get a sum-frequency component. Then F_o/F_s is 0.298. Starting up from this value to

the sum line $F_s + F_o$, the two nearest spurious frequencies to this intersection are at $F_o/F_s = 1.4$ and 1.2. For 1.4, the output is $1.4 \times 185 = 259$ mc due to the combination $2F_s - 2F_o$. For 1.2, we have both $4F_o$ and $3F_s -$

$6F_o$ giving $1.2 \times 185 = 222$ mc. Since the bandwidth is 3 mc, adequate selectivity should not be difficult to provide at 240 mc to discriminate against these 259-mc and 222-mc spurious components.



For chart, with F_o and F_s as mixer input frequencies (with F_s the higher) and F_s as desired output frequency. Lines intersected when tracing straight up from value of F_o/F_s represent combination frequencies, values of which can be read either from labels on lines or from scale of ordinates. Only intersections near desired combination (sum or difference) need be considered. When F_s is fixed, ordinate scale can be marked to give frequency directly

FIELD-POWER CONVERSION

Direct-reading conversion chart enables quick transfer of propagation data from field-strength to power-density values. Gain in db above 1 microvolt per meter and gain or loss in db above 1 microwatt per square meter shows at a glance

IN calculations involving propagation curves it is often convenient to do the computation in terms of power density rather than in terms of field strength, which is given in most propagation curves. Changing field intensity into power density can be greatly simplified by the conversion chart.

The chart is based upon the equation

$$P = \frac{E^2}{120\pi}$$

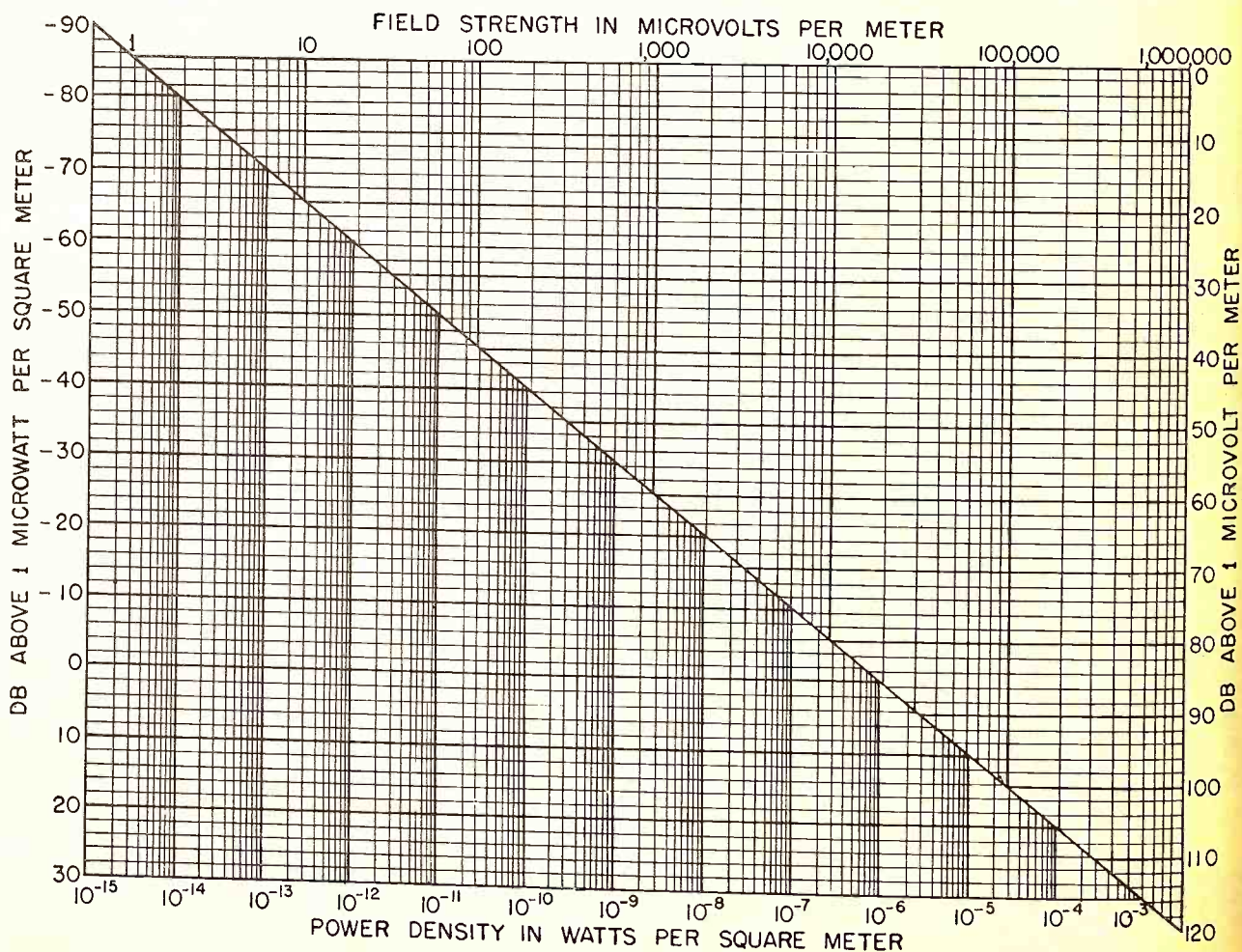
By **ROBERT E. PERRY**

where E is the field intensity, P is the power density and 120π is the resistance of free space.

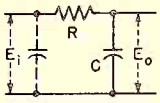

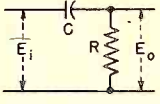
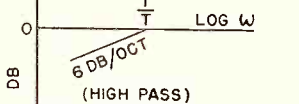
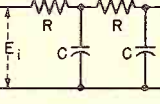
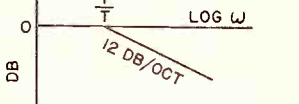
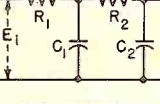
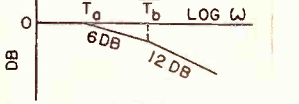
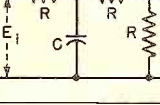

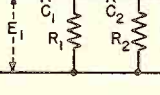
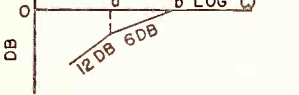
The conversion chart is direct reading. A value on the left scale

can be found in terms of the scale on the right side by reading directly across, or it can be read in terms of the upper or lower scale by reading over to the diagonal line and then up or down to the desired scale.

For example, a field of 500 μv per meter corresponds to a power density of approximately 7×10^{-10} watts per square meter. It is 54 db above 1 μv per meter, or about 32 db below 1 μw per square meter.



TRANSFER FUNCTIONS for R-C and R-L EQUALIZER NETWORKS

NETWORK	TRANSFER FUNCTION	GAIN CURVE
(1) 	$\frac{1}{1+Tp}$ $\phi = -\tan^{-1}T\omega$	
(2) 	$\frac{Tp}{1+Tp}$ $\phi = 90^\circ - \tan^{-1}T\omega$	
(3) 	$\frac{1}{1+3Tp+T^2p^2}$ $\phi = -\tan^{-1} \frac{3T\omega}{1-T^2\omega^2}$	
(4) 	$\frac{1}{1+(T_1+T_2+R_1C_2)p+T_1T_2p^2}$ $\phi = -\tan^{-1} \frac{(T_1+T_2+R_1C_2)\omega}{1-T_1T_2\omega^2}$	
(5) 	$\frac{1}{3+2Tp}$ $\phi = -\tan^{-1} \frac{2T\omega}{3}$	
(6) 	$\frac{T_1T_2p^2}{1+(T_1+T_2+R_1C_2)p+T_1T_2p^2}$ $\phi = 180^\circ - \tan^{-1} \frac{(T_1+T_2+R_1C_2)\omega}{1-T_1T_2\omega^2}$	

Gain curves and ratios of output to input voltage are given for each of thirty different networks. Phase angle equations are included, from which phase response at several representative frequencies is readily computed

THE accompanying tabulation of transfer functions (the ratio of output to input voltage, E_o/E_i) is the result of attempts to determine the electrical equivalent network of a pneumatic servo system and to find a satisfactory equalizer for that system. The phase angle ϕ between E_o and E_i is also given in the tables. Transfer functions of the elementary networks are included for the sake of completeness. Wherever possible the gain curves are represented by asymptotes and the corner frequency which is the intersection of these asymptotes. Where two or more corners exist, they must be of the order of a decade apart in order that the gain curve may

By E. W. TSCHUDI

be represented by asymptotes. When it is desired to compute the actual gain, p should be replaced by $j\omega$ in the transfer function and the amplitude computed in the usual manner for complex quantities, squaring the real and squaring the imaginary components separately, adding and taking the square root. In these expressions $T = RC$. In No. 1,

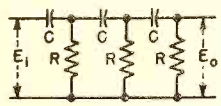
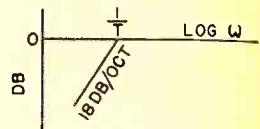
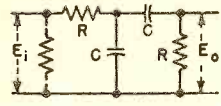
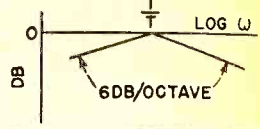
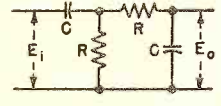
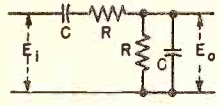
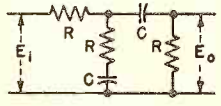
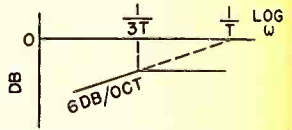
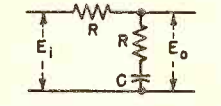
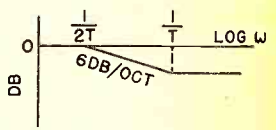
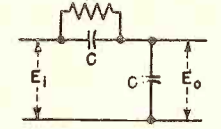
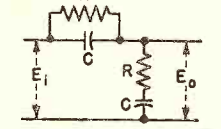
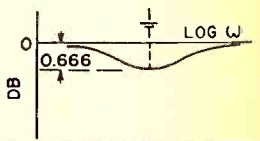
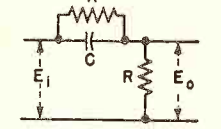
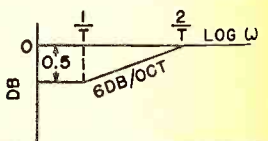
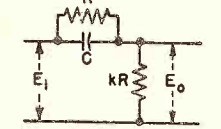
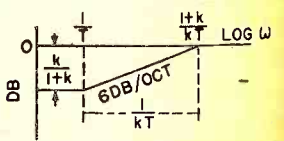
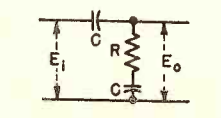
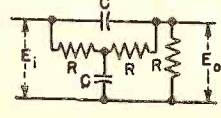
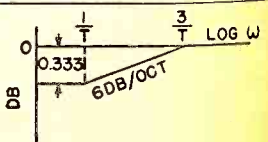
$$A = \sqrt{\frac{1}{1+T^2\omega^2}}$$

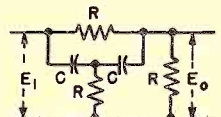
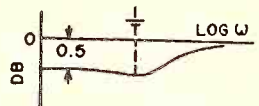
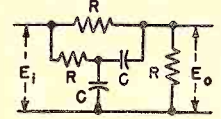
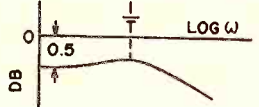
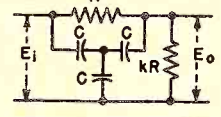
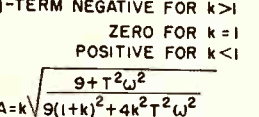
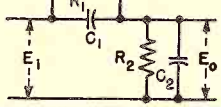
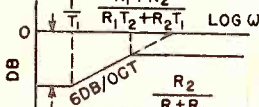
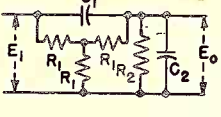
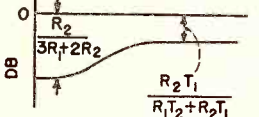
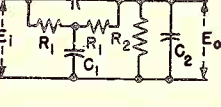
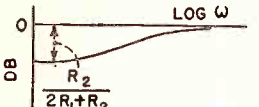
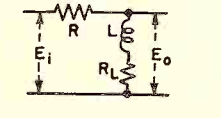
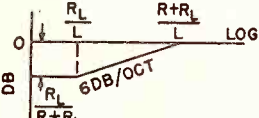
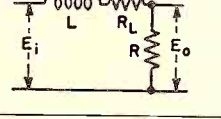
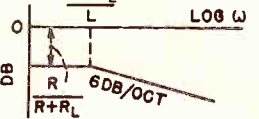
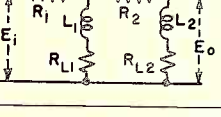

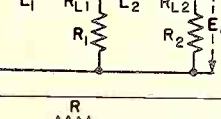
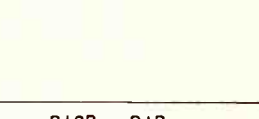
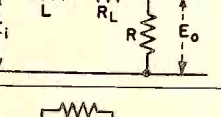
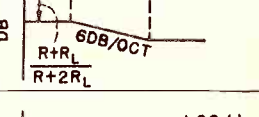
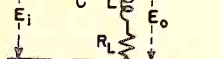

and the gain is $20 \log A$. In networks including inductance, the ohmic resistance of the inductance, R_L , is represented as a practical necessity. Phase re-

sponse curves are not included since it is comparatively simple to compute the phase angle at several representative frequencies. In general the phase angle is positive when the associated gain increases and negative when the gain decreases.

The inclusion of phantom shunt impedances in No. 1 and 8 indicates the transfer functions are not affected by their presence. The values of T_a and T_b in the corner frequencies of No. 4 and 6 are the roots of the quadratic expressions in the denominators of these transfer functions. They are different from the two time constants T_1 and T_2 that are, respectively, R_1C_1 and R_2C_2 . Tables are on following pages.

Transfer Functions for R-C and R-L Equalizer Networks (continued)

NETWORK	TRANSFER FUNCTION	GAIN CURVE
(7) 	$\frac{T^3 p^3}{1+5Tp+6T^2p^2+T^3p^3}$ $\phi = 270^\circ - \tan^{-1} \frac{(5-T^2\omega^2)T\omega}{1-6T^2\omega^2}$	
(8) 	$\frac{Tp}{1+3Tp+T^2p^2}$ $\phi = 90^\circ - \tan^{-1} \frac{3T\omega}{1-T^2\omega^2}$	
(9) 	$\frac{Tp}{1+3Tp+T^2p^2}$ $\phi = 90^\circ - \tan^{-1} \frac{3T\omega}{1-T^2\omega^2}$	SAME AS 8
(10) 	$\frac{Tp}{1+3Tp+T^2p^2}$ $\phi = 90^\circ - \tan^{-1} \frac{3T\omega}{1-T^2\omega^2}$	SAME AS 8
(11) 	$\frac{Tp}{1+3Tp}$ $\phi = 90^\circ - \tan^{-1} 3T\omega$	
(12) 	$\frac{1+Tp}{1+2Tp}$ $\phi = \tan^{-1} T\omega - \tan^{-1} 2T\omega$	
(13) 	$\frac{1+Tp}{1+2Tp}$ $\phi = \tan^{-1} T\omega - \tan^{-1} 2T\omega$	SAME AS 12
(14) 	$\frac{(1+Tp)^2}{1+3Tp+T^2p^2}$ $\phi = 2 \tan^{-1} T\omega - \tan^{-1} \frac{3T\omega}{1-T^2\omega^2}$	
(15) 	$\frac{1+Tp}{2+Tp}$ $\phi = \tan^{-1} T\omega - \tan^{-1} \frac{T\omega}{2}$	
(16) 	$\frac{k(1+Tp)}{(1+k)+kTp}$ $\phi = \tan^{-1} T\omega - \tan^{-1} \frac{kT\omega}{1+k}$	
(17) 	$\frac{1+Tp}{2+Tp}$ $\phi = \tan^{-1} T\omega - \tan^{-1} \frac{T\omega}{2}$	SAME AS 15
(18) 	$\frac{1+Tp}{3+Tp}$ $\phi = \tan^{-1} T\omega - \tan^{-1} \frac{T\omega}{3}$	

NETWORK	TRANSFER FUNCTION	GAIN CURVE
(19) 	$\frac{(1+Tp)^2}{2+5Tp+T^2p^2}$ $\phi = 2 \tan^{-1} T\omega - \tan^{-1} \frac{5T\omega}{2-T^2\omega^2}$	
(20) 	$\frac{1+3Tp}{2+5Tp+T^2p^2}$ $\phi = \tan^{-1} 3T\omega - \tan^{-1} \frac{5T\omega}{2-T^2\omega^2}$	
(21) 	$\frac{k(3+Tp)}{3(1+k)+2kTp} = \frac{k[9(1+k)+2k\omega^2T^2+3(1-k)]\omega T}{9(1+k)^2+4k^2\omega^2T^2}$ $\phi = \tan^{-1} \frac{T\omega}{3} - \tan^{-1} \frac{2kT\omega}{3(1+k)}$	<p>{ J-TERM NEGATIVE FOR k>1 ZERO FOR k=1 POSITIVE FOR k<1</p> $A = k \sqrt{\frac{9+T^2\omega^2}{9(1+k)^2+4k^2T^2\omega^2}}$ 
(22) 	$\frac{R_2(1+Tp)}{(R_1+R_2)+(R_1T_2+R_2T_1)p}$ $\phi = \tan^{-1} T_1\omega - \tan^{-1} \frac{(R_1T_2+R_2T_1)\omega}{R_1+R_2}$	
(23) 	$\frac{R_2(1+3T_1p)(1-T_2p)}{(3R_1+2R_2)+R_2(3T_1-2T_2)p-3T_2(R_1T_2+R_2T_1)p^2}$ $\phi = \tan^{-1} 3T_1\omega - \tan^{-1} T_2\omega - \tan^{-1} \frac{R_2(3T_1-2T_2)\omega}{3R_1+2R_2+3T_2(R_1T_2+R_2T_1)\omega^2}$	
(24) 	$\frac{R_2[C_1+(2T_1-T_2)p+T_1(T_1-2T_2)p^2-T_1^2T_2p^3]}{(2R_1+R_2)+(R_1T_1+3R_2T_1-R_2T_2)p+(R_2T_1^2-3R_2T_1T_2-2R_1T_2^2)p^2-T_1(R_1T_2+R_2T_1T_2)p^3}$ $\phi = \tan^{-1} \frac{(2T_1-T_2+T_1^2T_2\omega^2)\omega}{1-T_1(T_1-2T_2)\omega^2} - \tan^{-1} \frac{[R_1T_1+3R_2T_1-R_2T_2+T_1(R_1T_2^2+R_2T_1T_2)\omega^2]\omega}{2R_1+R_2-(R_2T_1^2-3R_2T_1T_2-2R_1T_2^2)\omega^2}$ <p>(LEADING ANGLE)</p>	
(25) 	$\frac{R_L+Lp}{R+R_L+Lp}$ $\phi = \tan^{-1} \frac{L\omega}{R_L} - \tan^{-1} \frac{L\omega}{R+R_L}$	
(26) 	$\frac{R}{R+R_L+Lp}$ $\phi = -\tan^{-1} \frac{L\omega}{R+R_L}$	
(27) 	$\frac{(R_L1+L_1p)(R_L2+L_2p)}{[(R_1+R_L1)(R_2+R_L2)+R_1L_1]+[(R_1+R_L1)L_2+(R_2+R_L2)L_1+R_1L_1]p+L_1L_2p^2}$ $\phi = \tan^{-1} \frac{L_1\omega}{R_L1} + \tan^{-1} \frac{L_2\omega}{R_L2} - \tan^{-1} \frac{[(R_1+R_L1)L_2+(R_2+R_L2)L_1+R_1L_1]\omega}{(R_1+R_L1)(R_2+R_L2)+R_1L_1-L_1L_2\omega^2}$	
(28) 	$\frac{R_1R_2}{[(R_1+R_L1)(R_1+R_2+R_L2)+R_1^2]+[(R_1+R_L1)L_2+(R_1+R_2+R_L2)L_1]p+L_1L_2p^2}$ $\phi = -\tan^{-1} \frac{[(R_1+R_L1)L_2+(R_1+R_2+R_L2)L_1]\omega}{(R_1+R_L1)(R_1+R_2+R_L2)+R_1^2-L_1L_2\omega^2}$	
(29) 	$\frac{R+R_L+Lp}{R+2R_L+2Lp}$ $\phi = \tan^{-1} \frac{L\omega}{R+R_L} - \tan^{-1} \frac{2L\omega}{R+2R_L}$	
(30) 	$\frac{(R_L+Lp)(1+Tp)}{(R+R_L)+(R_LT+L)p+LTp^2}$ $\phi = \tan^{-1} \frac{L\omega}{R_L} + \tan^{-1} T\omega - \tan^{-1} \frac{(R_LT+L)\omega}{R+R_L-LT\omega^2}$	

CATHODE FOLLOWER RESPONSE

Chart gives permissible cathode-follower pulse drive at video frequencies in terms of low-frequency sinusoidal input. Video-frequency overloading and distortion in conventionally loaded circuits originate in output time constant

By RALPH H. BAER

CATHODE FOLLOWERS frequently overload and distort on video signals when designed on the basis of low-frequency formulas. This behavior results from the effect of the time constant associated with

the output impedance of the cathode follower and the load capacitance. The usual formula for the peak signal permissible is

$$e_{o \text{ peak}} = \frac{E_B}{\mu} \left[\frac{1 + \frac{R_k}{R_p} (\mu + 1)}{\frac{R_k}{R_p} + 2} \right] \quad (1)$$

which is readily calculated. Inspection of Eq. 1 shows that medium values of μ (15-30) are

desirable for maximum permissible input signal.

When a video signal with rise time t microseconds is applied to a cathode follower this permissible grid swing is reduced by a factor of

$$1 + \frac{\frac{R_k}{R_p}}{\frac{R_k}{R_p} + 1} \left(\frac{1 - e^{-\frac{t}{T}}}{\frac{t}{T}} \right) \quad (2)$$

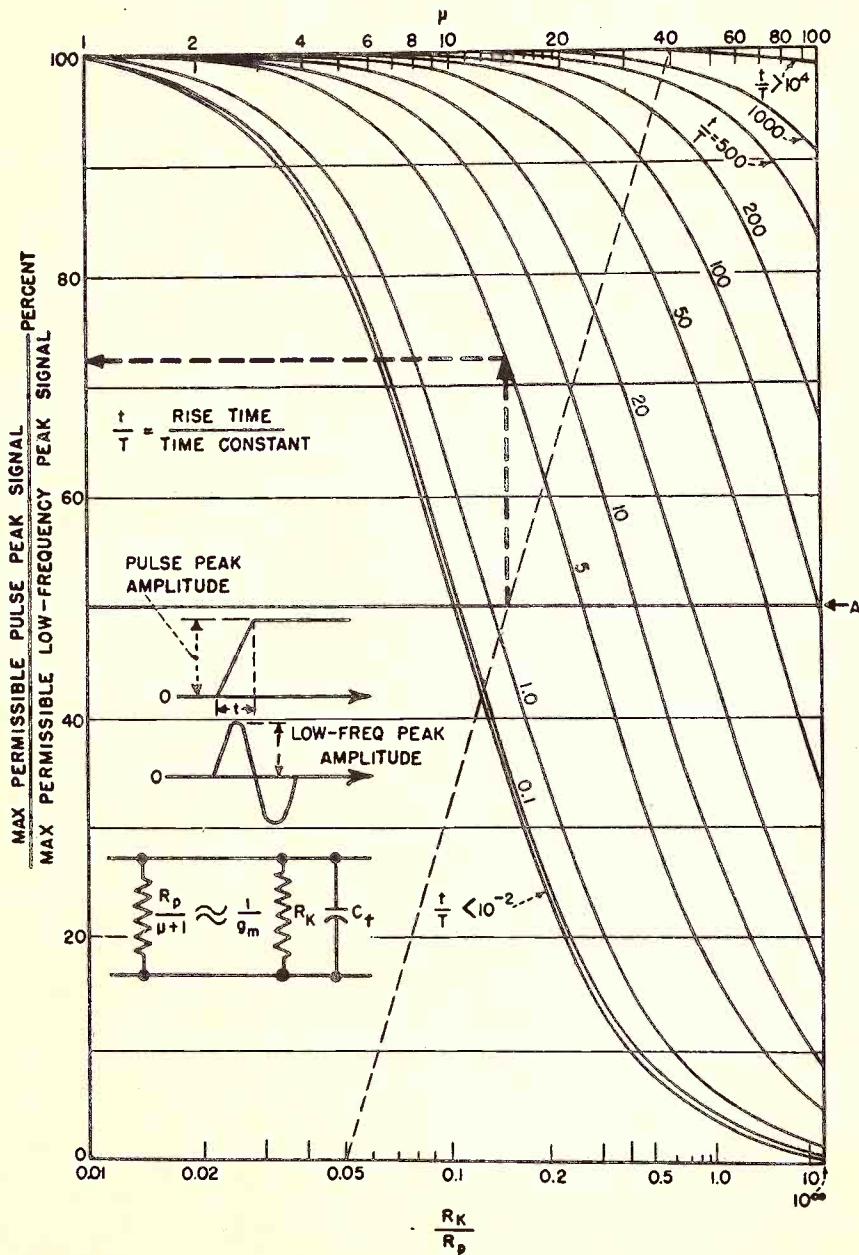
where T is the time constant. Whenever T approaches the pulse rise time in order of magnitude, the reduction in permissible grid signal can no longer be neglected and the correction factor of Eq. 2 becomes essential.

The graph is a solution of Eq. 2; the following procedure applies when a pulse waveform of rise time t is to be handled without distortion where

$$T = \frac{C_T R_k}{1 + g_m R_k}$$

(a) Determine the value of R_k/R_p and t/T . (b) On the graph, connect R_k/R_p with μ . (c) At the intersection of line A with the line drawn in step (b), read vertically up or down to the proper t/T curve. The solution is then obtained from the percent scale by reading horizontally to the left.

As an example, consider a tube with $\mu = 40$, $R_p = 20,000$ and a load impedance of $R_k = 1,000$ and $C_t = 250 \mu\mu\text{f}$ in parallel. From Eq. 1 $e_{o \text{ peak}} = 5.6$ volts for $E_B = 150$ volts. Suppose a video signal with rise time $t = 0.42 \mu\text{sec}$ is handled by the cathode follower. Then $T = 0.0834 \mu\text{sec}$ and $t/T = 5$. From the graph the permissible peak signal is seen to be 72.3 percent of $e_{o \text{ peak}}$ at low frequencies, or 4 volts.



PRODUCT LISTINGS

OF THE 1953-1954

electronics BUYERS' GUIDE

In the preparation of **ELECTRONICS BUYERS' GUIDE**, every effort was made to insure the completeness and accuracy of the Product Listings according to the information provided by the manufacturers.

The listings were compiled from information provided by more than 3,000 companies manufacturing electronic or allied products and include all products that will be available in the coming year, insofar as the companies themselves can determine. The completeness and accuracy of the listings are entirely due to the helpful cooperation of these manufacturers.

Products are arranged and indexed in a simple, easy-to-find, telephone-book style. Names of Manufacturers who are advertisers in the **BUYERS' GUIDE** are bold-faced in the listings and page numbers of their advertisements are shown. This makes it possible to obtain complete information on products quickly and easily by referring to the advertising pages.

Several new product headings have been added. Due to lack of sufficient information, only manufacturers who were known are included under these new headings. Listings include an index of registered trade names and an alphabetical listing of all companies engaged in the manufacture of electronic components, complete equipment or allied products.

NOTE: *This punch-out tab is for your convenience in locating the Product Listings in this issue. Simply push out and fold under. It will then serve as a tab mark to indicate where the listings start.*

PUSH OUT
AND FOLD

Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
CIBA CO., INC., 627 Greenwich St., New York 14, N. Y. ADV. PG. 377.
 Cox & Co., Inc., 50 Broad St., New York 4, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Goodyear Tire & Rubber Co., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Insulatine Co., 1 Broadway, New York, N. Y.
 Javex, P. O. Box 646, Redlands, Calif.
 Marbon Corp., Gary, Ind.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Moyon Co., C. P., 908 Chicago Ave., Chicago 22, Ill.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
 Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, Ill.
 Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.
 Pierce & Stevens, Inc., Buffalo 3, N. Y.
 Reichhold Chemicals, Inc., 630 Fifth Ave., New York 20, N. Y.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Shell Chemical Corp., 500 Fifth Ave., New York 36, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

ADHESIVES — Waterproof & Corrosion Proof Compounds

American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
 Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.
 Cox & Co., Inc., 50 Broad St., New York 4, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Insulatine Co., 1 Broadway, New York, N. Y.
 Javex, P. O. Box 646, Redlands, Calif.
 Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
 Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, Ill.
 Pierce & Stevens, Inc., Buffalo 3, N. Y.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Shell Chemical Corp., 500 Fifth Ave., New York 36, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stevenson Bro. & Co., 110 Race St., Philadelphia 6, Pa.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

ALARM SYSTEMS

See Controls, Alarm System

ALPHA RAY SOURCES

See Isotopes

ALUMINUM OXIDE

See Insulation Materials

AMMETERS

AMMETERS—RF

See Instruments—Electrical Measuring

AMPLIFIERS—Audio Frequency

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, Ill. ADV. PG. 542.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
AMERICAN ELECTRONIC LABS., Inc., 641 Arch St., Philadelphia 6, Pa. ADV. PG. 528.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. ADV. PG. 360.
 Ansley Mfg. Co., Arthur, Doylestown, Pa.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bell Sound Systems, Inc., 555 Marlon Rd., Columbus 7, Ohio.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol, Pa. ADV. PG. 547.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
 British Radio Electronics Ltd., 1 Thomas Circle, Washington 5, D. C.
 Brocner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.
 Brook Electronics, Inc., Box 491, Elizabeth, N. J.
CHRYSLER ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Curtis-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J.
 Dalmotron Co., 534 Laurel St., San Carlos, Calif.
DOLLAR CO., ROBERT, Communications Equipment Div., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 591.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Engineering Research Associates, Div. of Remington Rand, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
 Espy Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
 Farmers Engineering & Mfg. Co., Irwin, Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Fidelity Amplifier Co., 703 Willow St., Chicago 14, Ill.
 Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
FLUKE ENGINEERING CO., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 578.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
FREED TRANSFORMER, INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 Furst Electronics, 3322 W. Lawrence Ave., Chicago 25, Ill.
GALBRAITH & SON ELECTRIC CORP., C. C., 450 Avenue of the Americas, New York 11, N. Y. ADV. PG. 542.
 Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Godfrey Mfg. Co., 2642 S. Michigan Ave., Chicago, Ill.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
 Gulton Mfg. Corp., Metuchen, N. J.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 568.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 I.D.E.A., 7900 Pendleton Pike, Indianapolis 26, Ind.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KALBFELL LABS. INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 72.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
LANGVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 360.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
 Lesa, Via Bergamo 21, Milan, Italy.
 Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
 McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, Ill.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. ADV. PG. 127.
 Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Northeastern Engineering Inc., Manchester, N. H.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Pedersen Electronics Co., Mount Diablo Blvd., Lafayette, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Pickard & Burns, Inc., Needham, Mass.
 Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 271.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Craftsmen, Inc., 4401 N. Ravenswood Ave., Chicago 40, Ill.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Scott, Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Shevers, Inc., Harold, 123 W. 64th St., New York 23, N. Y.
 Simpson Mfg Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Special Products Co., Silver Spring, Md.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 430, 431.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Symphony Radio & TV Co., 925 South Western Ave., Los Angeles 6, Calif.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
 Talk-O-Products, Inc., 163 St. Paul St., Rochester 6, N. Y.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

P. O. Box 1207, Lindsay, Calif.
TRANSFORMER CO., 150 Varick St., New York
 ADV. PG. Inside Front Cover.
 Electronics Mfg. Co., 576 W. Merrick Rd., Lyn-
 Y.
 of America, 229 W. 28th St., New York 1,
 tronic Corp., 222 E. Ohio St., Indianapolis
 o., George, 835 N. 19th St., Philadelphia
 O., 145 W. Hazel, Inglewood, Calif. ADV. PG.
 S, INC., 333 Sixth Ave., New York 14,
 G. PG. 596.
 Chicago Corp., 5610 Bloomingdale Ave., Chicago
 Electronic Labs., Inc., 7556 Melrose Ave.,
 es 46, Calif.
 Electronics Co., 5873 W. Jefferson Blvd.,
 es 16, Calif.
 Electro-Acoustic Labs., 204 S. Beverly Drive,
 IIs, Calif.
 and Electric Labs., Inc., 805 S. 5th St.,
 4, Wis.
 ries, Inc., 421 W. 54th St., New York 19,
 eering & Construction Co., P. O. Box 590,
 N. J.
 ic Co., 1400 Chestnut St., Kansas City, Mo.
 , Rudolph, North Tonawanda, N. Y.
 gs Instrument Co., Inc., P. O. Box 106,
 ings, Ohio.
 nine Products, Inc., Electronics Div., 5100-
 air Ave., Cleveland 3, Ohio.

S—Audio Input Systems

RADIO CORP., 833 W. Jackson Blvd., Chicago
 V. PG. 542.
 Corp., 9356 Santa Monica Blvd., Beverly
 f.
 ment Co., Inc., 805 Middle Neck Rd., Great
 Y.
 ment Co., Inc., 133 W. 14th St., New York
 rronics Corp., 2838 N. Naomi St., Burbank,
 a.
WILLIAMSON, 235 Fairfield Ave., Upper
 ADV. PG. 239.
 systems, Inc., 555 Marion Rd., Columbus 7,
 states, 4917 W. Jefferson Blvd., Los Angeles
 nc., David, 29 Ninth Ave., New York 14,
 nics, Inc., Box 491, Elizabeth, N. J.
ENGINEERING CO., 1510 W. Verdugo Ave.,
 Calif. ADV. PG. 289.
RADIO CO., Cedar Rapids, Iowa. ADV. PG.
 a), Ltd., 301-303 Windsor St., Halifax,
 ada.
 Corp., Electronics Div., 631 Central Ave.,
 N. J.
 tronics of New York, Inc., 73-39 Wood-
 Forest Hills, N. Y.
 ew York, Inc., 44-31 Douglaston Pkwy.,
 N. Y.
 rding Equipment Corp., 154th St. & 7th
 Pastone, N. Y.
 rring Co., 8026 Monticello Ave., Skokie, Ill.
 Corp., 41 E. 47th St., New York, N. Y.
 Co., Quincy, Ill.
ELECTRIC CO., Electronics Div., Electronics
 use, N. Y. ADV. PG. 1-18.
 Corp., Metuchen, N. J.
 Inc., H. A., 521 E. 162nd St., New York
 Benton Harbor, Mich. ADV. PG. 486.
ENGINEERING CO., Main St. & Urban Ave.,
 N. Y. ADV. PG. 568.
 nc., 5014 N. Encinta Ave., Temple City,
 O Pendleton Pike, Indianapolis 26, Ind.
 s Corp., 2432 Grand Concourse, New York
 nics Inc., 7945 Germantown Ave., Philadel-
 a.
 eering Laboratory, Inc., 320 Water St.,
 N. Y.
 c., 21 N. 3rd St., Minneapolis, Minn.
 Div., Maguire Industries, Inc., Mt. Carmel,
 ELECTRONIC CO., Box 450, Red Bank, N. J.
 127.
 io Products Co., 6824 Lexington Ave.,
 38, Calif.
 eengineering Inc., Manchester, N. H.
ER CORP., 198 Albion Ave., Paterson 2,
 PG. 514.
 rronics Co., Mount Diablo Blvd., Lafayette,
 CO., 309 Woods Ave., Oceanside, N. Y.
 2160.
 tronics, Inc., 643 Milwaukee Ave., Chicago
OF AMERICA, Engineering Products Dept.,
 J. ADV. PG. 295, Inside Back & Back
 Corp., 84 S. Water St., Port Chester, N. Y.
 Corp., 3515 W. Addison St., Chicago 18.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cam-
 bridge 39, Mass.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long
 Island City 3, N. Y.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24,
 N. Y.
 Stancil-Hoffman Corp., 1016 N. Highland Ave., Holly-
 wood 38, Calif.
 Standard Electronics Corp., 289 Emmet St., Newark 5,
 N. J.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Symphony Radio & TV Co., 925 South Western Ave., Los
 Angeles 6, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd,
 Pa. ADV. PG. 546.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
 New York 14, N. Y.
WAVEFORMS, INC., 333 Sixth Ave., New York 14,
 N. Y. ADV. PG. 596.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Western Sound & Electric Labs., Inc., 805 S. 5th St.,
 Milwaukee 4, Wis.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.
 Yellow Springs Instrument Co., Inc., P. O. Box 106,
 Yellow Springs, Ohio.

AMPLIFIERS—Audio Subminiature

American Electroneering Corp., 2040 Colorado Ave.,
 Santa Monica, Calif.
 Audio Products Corp., 2265 Westwood Blvd., Los An-
 geles 64, Calif.
 Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield,
 N. J.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman
 Way, North Hollywood, Calif.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd.,
 Rockaway Beach 93, N. Y.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie,
 Ill.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 219.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
 Westbury, N. Y. ADV. PG. 568.
 Jowit Electronics Inc., 7945 Germantown Ave., Philadel-
 phia 18, Pa.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego
 10, Calif. ADV. PG. 365.
 McIntosh Engineering Laboratory, Inc., 320 Water St.,
 Binghamton, N. Y.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J.
 ADV. PG. 127.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2,
 N. J. ADV. PG. 514.
 Paravox, Inc., 2056 E. Fourth St., Cleveland 15, Ohio.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38,
 Station J, Buffalo 8, N. Y. ADV. PG. 566.
RADIO CORP OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10,
 Calif.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cam-
 bridge 39, Mass.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Spar Engineering & Development Inc., S & Paxton Aves.,
 Wyncote, Pa.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Symphony Radio & TV Co., 925 South Western Ave.,
 Los Angeles 6, Calif.
 Telectron Industries Corp., 35-18 37th St., Long Island
 City 1, N. Y.
 Telex, Inc., Telex Park, St. Paul 1, Minn.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd,
 Pa. ADV. PG. 546.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
 New York 14, N. Y.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV.
 PG. 628.
 White Rock Mfg. Corp., White Rock, S. C.

AMPLIFIERS—d-c

ADVANCE ELECTRONICS CO., 451 Highland Ave.,
 Passaic, N. J. ADV. PG. 621.
 Allegany Instrument Co., Inc., Cumberland, Md.
AMERICAN ELECTRONIC LABS., INC., 641 Arch St.,
 Philadelphia 6, Pa. ADV. PG. 528.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New
 York 13, N. Y. ADV. PG. 360.
 Audio Equipment Co., Inc., 805 Middle Neck Rd., Great
 Neck, N. Y.
 Audio Instrument Co., Inc., 133 W. 14th St., New York
 11, N. Y.
 Autotron Co., The, Danville, Ill.

Avion Instrument Corp., Div. of American Car & Foundry
 Co., 295 State Highway #17, Paramus, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
 Beam Instruments Corp., 350 Fifth Ave., New York 1,
 N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7,
 Ohio.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3,
 N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleve-
 land 14, Ohio. ADV. PG. 374, 375.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.
 82, 83.
COMPUTER CORP. OF AMERICA, 149 Church St., New
 York, N. Y. ADV. PG. 594.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,
 N. S., Canada.
 Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
 DuMont Laboratories, Inc., Allen B., Instrument Div.,
 760 Bloomfield Ave., Clifton, N. J.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J.
 ADV. PG. 157.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave.,
 Philadelphia 18, Pa. ADV. PG. 336.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33,
 Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie,
 Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St.,
 Philadelphia 40, Pa. ADV. PG. 575.
 Furst Electronics, 3322 W. Lawrence Ave., Chicago 25,
 Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
 Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.
Graun-Stadler Co., Engineering Service Dept., 106
 Hampshire St., Cambridge 39, Mass.
 Hanover Developments, 401 E. 74th St., New York 21,
 N. Y.
 Hathaway Instruments Co., 1315 S. Clarkson St., Denver
 10, Colo.
INDUSTRIAL CONTROL CO., Straight Path & Arlington
 Ave., Wyandanch, N. Y. ADV. PG. 599.
 International Research Associates, 2221 Warwick Ave.,
 Santa Monica, Calif.
 James Vibrapowr Co., 4036 N. Rockwell St., Chicago
 18, Ill.
 Jersey City Technical Laboratory, 880 Bergen Ave.,
 Jersey City 6, N. J.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego
 10, Calif. ADV. PG. 365.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleve-
 land 15, Ohio. ADV. PG. 72.
 Kuljian Corp., Electronics Div., 1200 N. Broad St.,
 Philadelphia 21, Pa.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St.,
 Boston 14, Mass. ADV. PG. 38, 39.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia
 30, Pa.
 Lesa, Via Bergamo 21, Milan, Italy.
LISTON-BECKER INSTRUMENT CO., INC., 649 Hope
 St., Springfield, Stamford, Conn. ADV. PG. 608.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New
 York 55, N. Y. ADV. PG. 437.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J.
 ADV. PG. 127.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa,
 Okla.
 Miller Corp., William, 325 N. Halstead Ave., Pasadena
 8, Calif.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box
 997, Schenectady, N. Y. ADV. PG. 611.
 Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago
 25, Ill.
 Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
 Philbrick Researches, Inc., George A., 230 Congress St.,
 Boston 10, Mass.
 Photocon Research Products, 421 N. Foothill Blvd.,
 Pasadena, Calif.
 Photon Instrument Co., 6516 Detroit Ave., Cleveland
 2, Ohio.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,
 N. Y.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd.,
 Playa del Rey, Calif.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St.,
 Skokie, Ill.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1,
 Calif.
SANBORN CO., Industrial Div., 39 Osborn St., Cam-
 bridge 39, Mass. ADV. PG. 513.
 Servo-Tek Products Co., Inc., 1086 Goffle Rd., Haw-
 thorne, N. J.
 Southwest Engineering & Mfg. Co., P. O. Box 3325, San
 Diego 3, Calif.
 Southwestern Industrial Electronics Co., 2831 Post Oak
 Rd., P. O. Box 13058, Houston 19, Texas.
 Spar Engineering & Development Inc., S & Paxson Aves.,
 Wyncote, Pa.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Tektronix, Inc., P. O. Box 831, Portland, Ore.



Product
Listings

Alphabetical Listings Of All COMPONENTS—COMPLETE UNITS—ALLIED PRODUCTS Used in Electronic Equipment for All Purposes

The complete electronic and allied product lines of more than three thousand manufacturers are arranged and indexed in a simple, easy-to-use, telephone book in the following listings.

Products are listed alphabetically by generic names followed by descriptive or type names where necessary, as **ADAPTERS—Battery**.

For example: To find the manufacturers of ionization tubes you would turn to the generic product heading **TUBES** and listed alphabetically under that you would find **TUBES—Ionization**.

The only exceptions are **INSULATING COMPOUNDS; IONIZATION MATERIALS; INSULATION PARTS; METALS; PLASTIC MATERIALS; and TUBE PARTS**. Products falling in these classifications are arranged alphabetically under their respective headings. A breakdown of electrical measuring

instruments is listed under the generic product heading **INSTRUMENTS, ELECTRICAL MEASURING** and cross-indexed throughout the listings.

Cross references are provided wherever necessary to cover names, other than the standard ones, that are sometimes used.

Manufacturers under each product heading are also arranged alphabetically. Those companies who are advertisers in this issue are bold-faced and the page numbers of their advertisements given to permit quick and easy reference for the necessary technical data.

In compiling the listings for this year's **ELECTRONICS BUYERS' GUIDE** extreme care has been taken to ascertain those products which are in production, or available within a reasonable time and, unrestricted for general industrial use.

THE ONLY *Completely Verified* LISTING OF MANUFACTURERS OF ELECTRONIC AND ALLIED PRODUCTS

ADAPTERS—Particle

FALCRAFT CORP., Electronic Div., 14806 Van Nuys, Calif. ADV. PG. 573.
CENTRIC CO., Apparatus Sales Div., 1 River Road, N. Y. ADV. PG. 1-18.
Engineering Corp., 7 University Rd., Cambridge, Mass.

ADAPTERS

Adaptics Corp., Pacific Division, 11600 Sherman Way, Van Nuys, Calif.
ADAPTERS, INC., 6135 Magnolia Ave., Riverdale, Ill. ADV. PG. 610.
ADAPTERS CO., 3405 Perkins Ave., Cleveland, Ohio. ADV. PG. 374, 375.
ADAPTERS, P. O. Box 72, Winchester, Mass.
ADAPTERS Engineering Corp., 300 N. Sierra Madre Blvd., Pasadena 15, Calif.
ADAPTERS, INC., 383 N. Foothill Blvd., Pasadena, Calif. ADV. PG. 589.
ADAPTERS Research Associates, Div. of Remington-Union, 702 W. Minnehaha Ave., St. Paul, Minn.
ADAPTERS, G. M., Bin N., Pasadena, Calif.
ADAPTERS Corp., Metuchen, N. J.
ADAPTERS Instrument Co., 1315 S. Clarkson St., Denver
ADAPTERS Electronics, Inc., 8060 Wheeler St., Detroit
ADAPTERS, Inc., 5 Fottler Rd., Hingham, Mass.
ADAPTERS, William, 325 N. Halstead St., Pasadena 8, Calif.
ADAPTERS CO., 309 Woods Ave., Oceanside, N. Y.
ADAPTERS Engineering, Crescent Blvd., at Drexel Ave., Township, Camden 11, N. J.
ADAPTERS, Irma, Hosmer, 385 Putnam Ave., Cambridge, Mass.
ADAPTERS, S.M.S., INC., Post & Stewart Aves., Westfield, Mass. ADV. PG. 426.
ADAPTERS, Inc., 12401 W. Olympic Blvd., Los Angeles 4, Calif.
ADAPTERS, 466 W. Irving Park Road, Chicago 34, Ill.
ADAPTERS INSTRUMENT CO., 5806 Hough Ave., Cleveland, Ohio. ADV. PG. 206, 207.

ADAPTERS—Battery

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
EBY INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.

ADAPTERS—Foreign

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.

ADAPTERS—Panoramic

PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.

ADAPTERS—Phase

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
White Industries, Inc., 421 W. 54th St., New York 19, N. Y.

ADAPTERS—Test

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
Diamond Mfg. Corp., 7 North Ave., Wakefield, Mass.
Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
U. S. COMPONENTS, INC., 454 E. 148th St., New York 55, N. Y. ADV. PG. 313.
United Technical Laboratories, Box 425-V, Morristown, N. J.

ADAPTERS—Tube

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. ADV. PG. 524.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 568.
J F D MFG CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
Production Tool & Fixture Co., 37 W. Main St., Oyster Bay, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

ADHESIVES

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
Armstrong Cork Co., Lancaster, Pa.
Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.

Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
CIBA CO., INC., 627 Greenwich St., New York 14, N. Y. ADV. PG. 377.
 Cox & Co., Inc., 50 Broad St., New York 4, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Goodyear Tire & Rubber Co., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Insulatine Co., 1 Broadway, New York, N. Y.
 Javex, P. O. Box 646, Redlands, Calif.
 Marbon Corp., Gary, Ind.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Moyon Co., C. P., 908 Chicago Ave., Chicago 22, Ill.
 Neo-Sil Corp., 26 Cornelson Ave., Jersey City 4, N. J.
 Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, Ill.
 Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.
 Pierce & Stevens, Inc., Buffalo 3, N. Y.
 Reichhold Chemicals, Inc., 630 Fifth Ave., New York 20, N. Y.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Shell Chemical Corp., 500 Fifth Ave., New York 36, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

ADHESIVES — Waterproof & Corrosion Proof Compounds

American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
 Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.
 Cox & Co., Inc., 50 Broad St., New York 4, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Insulatine Co., 1 Broadway, New York, N. Y.
 Javex, P. O. Box 646, Redlands, Calif.
 Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Neo-Sil Corp., 26 Cornelson Ave., Jersey City 4, N. J.
 Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, Ill.
 Pierce & Stevens, Inc., Buffalo 3, N. Y.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Shell Chemical Corp., 500 Fifth Ave., New York 36, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stevenson Bro. & Co., 110 Race St., Philadelphia 6, Pa.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

ALARM SYSTEMS

See Controls, Alarm System

ALPHA RAY SOURCES

See Isotopes

ALUMINUM OXIDE

See Insulation Materials

AMMETERS

AMMETERS—RF

See Instruments—Electrical Measuring

AMPLIFIERS—Audio Frequency

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, Ill. ADV. PG. 542.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
AMERICAN ELECTRONIC LABS., Inc., 641 Arch St., Philadelphia 6, Pa. ADV. PG. 528.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. ADV. PG. 360.
 Ansley Mfg. Co., Arthur, Doylestown, Pa.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bell Sound Systems, Inc., 555 Marlon Rd., Columbus 7, Ohio.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol, Pa. ADV. PG. 547.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
 British Radio Electronics Ltd., 1 Thomas Circle, Washington 5, D. C.
 Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.
 Brook Electronics, Inc., Box 491, Elizabeth, N. J.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J.
 Dalmotron Co., 534 Laurel St., San Carlos, Calif.
DOLLAR CO., ROBERT, Communications Equipment Div., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 591.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Engineering Research Associates, Div. of Remington Rand, Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
 Farmers Engineering & Mfg. Co., Irwin, Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Fidelity Amplifier Co., 703 Willow St., Chicago 14, Ill.
 Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
FLUKE ENGINEERING CO., JOHN, 1111 W. Nicholson St., Seattle 99, Wash. ADV. PG. 578.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
FREED TRANSFORMER, INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 Furst Electronics, 3322 W. Lawrence Ave., Chicago 25, Ill.
GALBRAITH & SON ELECTRIC CORP., C. C., 450 Avenue of the Americas, New York 11, N. Y. ADV. PG. 542.
 Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Godfrey Mfg. Co., 2642 S. Michigan Ave., Chicago, Ill.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
 Gulfton Mfg. Corp., Metuchen, N. J.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 568.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 I.D.E.A., 7900 Pendleton Pike, Indianapolis 26, Ind.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KALBFELL LABS. INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 72.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
LANGVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 360.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
 Lesa, Via Bergamo 21, Milan, Italy.
 Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
 McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, Ill.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. ADV. PG. 127.
 Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Northeastern Engineering Inc., Manchester, N. H.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Pedersen Electronics Co., Mount Diablo Blvd., Lafayette, Calif.
 Philco Corp., Accessory Div., A & Alleghany Ave., Philadelphia 34, Pa.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Pickard & Burns, Inc., Needham, Mass.
 Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 271.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Craftsmen, Inc., 4401 N. Ravenswood Ave., Chicago 40, Ill.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Scott, Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Shevers, Inc., Harold, 123 W. 64th St., New York 23, N. Y.
 Simpson Mfg Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Social Products Co., Silver Spring, Md.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 430, 431.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Symphony Radio & TV Co., 925 South Western Ave., Los Angeles 6, Calif.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
 Talk-O-Products, Inc., 163 St. Paul St., Rochester 6, N. Y.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Telecro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

P. O. Box 1207, Lindsay, Calif.
TRANSFORMER CO., 150 Varick St., New York
 ADV. PG. Inside Front Cover.
 Electronics Mfg. Co., 576 W. Merrick Rd., Lyn-
 Y.
 of America, 229 W. 28th St., New York 1,
 Electronic Corp., 222 E. Ohio St., Indianapolis
 Co., George, 835 N. 19th St., Philadelphia
CO., 145 W. Hazel, Inglewood, Calif. ADV. PG.
S. INC., 333 Sixth Ave., New York 14,
 V. PG. 596.
 Cago Corp., 5610 Bloomingdale Ave., Chicago
 Electronic Labs., Inc., 7556 Melrose Ave.,
 es 46, Calif.
 Electronics Co., 5873 W. Jefferson Blvd.,
 es 16, Calif.
 Electro-Acoustic Labs., 204 S. Beverly Drive,
 Hills, Calif.
 End & Electric Labs., Inc., 805 S. 5th St.,
 4, Wis.
 etries, Inc., 421 W. 54th St., New York 19,
 neering & Construction Co., P. O. Box 590,
 N. J.
 ric Co., 1400 Chestnut St., Kansas City, Mo.
 , Rudolph, North Tonawanda, N. Y.
 gs Instrument Co., Inc., P. O. Box 106,
 ings, Ohio.
 ine Products, Inc., Electronics Div., 5100-
 air Ave., Cleveland 3, Ohio.

RS—Audio Input Systems
RADIO CORP., 833 W. Jackson Blvd., Chicago
 DV. PG. 542.
 g Corp., 9356 Santa Monica Blvd., Beverly
 ment Co., Inc., 805 Middle Neck Rd., Great
 Y.
 ment Co., Inc., 133 W. 14th St., New York
 onics Corp., 2838 N. Naomi St., Burbank,
WILLIAMSON, 235 Fairfield Ave., Upper
 ADV. PG. 239.
 ystems, Inc., 555 Marion Rd., Columbus 7,
 iates, 4917 W. Jefferson Blvd., Los Angeles
 nc., David, 29 Ninth Ave., New York 14,
 onics, Inc., Box 491, Elizabeth, N. J.
ENGINEERING CO., 1510 W. Verdugo Ave.,
 Calif. ADV. PG. 289.
RADIO CO., Cedar Rapids, Iowa. ADV. PG.
 da), Ltd., 301-303 Windsor St., Halifax,
 ada.
 Corp., Electronics Div., 631 Central Ave.,
 N. J.
 onics of New York, Inc., 73-39 Wood-
 Forest Hills, N. Y.
 ew York, Inc., 44-31 Douglaston Pkwy.,
 N. Y.
 ording Equipment Corp., 154th St. & 7th
 estone, N. Y.
 ering Co., 8026 Monticello Ave., Skokie, Ill.
 Corp., 41 E. 47th St., New York, N. Y.
 Co., Quincy, Ill.
ELECTRIC CO., Electronics Div., Electronics
 use, N. Y. ADV. PG. 1-18.
 Corp., Metuchen, N. J.
 Inc., H. A., 521 E. 162nd St., New York
 Benton Harbor, Mich. ADV. PG. 485.
ENGINEERING CO., Main St. & Urban Ave.,
 N. Y. ADV. PG. 568.
 nc., 5014 N. Encinta Ave., Temple City,
 0 Pendleton Pike, Indianapolis 26, Ind.
 s Corp., 2432 Grand Concourse, New York
 nics Inc., 7945 Germantown Ave., Philadel-
 a.
 neering Laboratory, Inc., 320 Water St.,
 N. Y.
 nc., 21 N. 3rd St., Minneapolis, Minn.
 Div., Maguire Industries, Inc., Mt. Carmel,
ELECTRONIC CO., Box 450, Red Bank, N. J.
 127.
 dio Products Co., 6824 Lexington Ave.,
 38, Calif.
 neering Inc., Manchester, N. H.
ER CORP., 198 Albion Ave., Paterson 2,
 PG. 514.
 onics Co., Mount Diablo Blvd., Lafayette,
CO., 309 Woods Ave., Oceanside, N. Y.
 160.
 onics, Inc., 643 Milwaukee Ave., Chicago
OF AMERICA, Engineering Products Dept.,
 J. ADV. PG. 295, Inside Back & Back
 Corp., 84 S. Water St., Port Chester, N. Y.
 Corp., 3515 W. Addison St., Chicago 18,

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cam-
 bridge 39, Mass.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long
 Island City 3, N. Y.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24,
 N. Y.
 Stancil-Hoffman Corp., 1016 N. Highland Ave., Holly-
 wood 38, Calif.
 Standard Electronics Corp., 289 Emmet St., Newark 5,
 N. J.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Symphony Radio & TV Co., 925 South Western Ave., Los
 Angeles 6, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd,
 Pa. ADV. PG. 546.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
 New York 14, N. Y.
WAVEFORMS, INC., 333 Sixth Ave., New York 14,
 N. Y. ADV. PG. 596.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Western Sound & Electric Labs., Inc., 805 S. 5th St.,
 Milwaukee 4, Wis.
 Wuriltzer Co., Rudolph, North Tonawanda, N. Y.
 Yellow Springs Instrument Co., Inc., P. O. Box 106,
 Yellows Springs, Ohio.

AMPLIFIERS—Audio Subminiature

American Electroneering Corp., 2040 Colorado Ave.,
 Santa Monica, Calif.
 Audio Products Corp., 2265 Westwood Blvd., Los An-
 geles 64, Calif.
 Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield,
 N. J.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman
 Way, North Hollywood, Calif.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd.,
 Rockaway Beach 93, N. Y.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie,
 Ill.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 219.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave.,
 Westbury, N. Y. ADV. PG. 568.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadel-
 phia 18, Pa.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego
 10, Calif. ADV. PG. 365.
 McIntosh Engineering Laboratory, Inc., 320 Water St.,
 Binghamton, N. Y.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J.
 ADV. PG. 127.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2,
 N. J. ADV. PG. 514.
 Paravox, Inc., 2056 E. Fourth St., Cleveland 15, Ohio.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38,
 Station J, Buffalo 8, N. Y. ADV. PG. 566.
RADIO CORP OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10,
 Calif.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cam-
 bridge 39, Mass.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Spar Engineering & Development Inc., S & Paxton Aves.,
 Wyncote, Pa.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Symphony Radio & TV Co., 925 South Western Ave.,
 Los Angeles 6, Calif.
 Teletron Industries Corp., 35-18 37th St., Long Island
 City 1, N. Y.
 Telex, Inc., Telex Park, St. Paul 1, Minn.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd,
 Pa. ADV. PG. 546.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
 New York 14, N. Y.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV.
 PG. 628.
 White Rock Mfg. Corp., White Rock, S. C.

AMPLIFIERS—d-c

ADVANCE ELECTRONICS CO., 451 Highland Ave.,
 Passaic, N. J. ADV. PG. 621.
 Allegany Instrument Co., Inc., Cumberland, Md.
AMERICAN ELECTRONIC LABS., INC., 641 Arch St.,
 Philadelphia 6, Pa. ADV. PG. 528.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New
 York 13, N. Y. ADV. PG. 360.
 Audio Equipment Co., Inc., 805 Middle Neck Rd., Great
 Neck, N. Y.
 Audio Instrument Co., Inc., 133 W. 14th St., New York
 11, N. Y.
 Autotron Co., The, Danville, Ill.

Avion Instrument Corp., Div. of American Car & Foundry
 Co., 295 State Highway #17, Paramus, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
 Beam Instruments Corp., 350 Fifth Ave., New York 1,
 N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7,
 Ohio.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3,
 N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleve-
 land 14, Ohio. ADV. PG. 374, 375.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.
 82, 83.
COMPUTER CORP. OF AMERICA, 149 Church St., New
 York, N. Y. ADV. PG. 594.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,
 N. S., Canada.
 Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
 DuMont Laboratories, Inc., Allen B., Instrument Div.,
 760 Bloomfield Ave., Clifton, N. J.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Electro-Mechanical Research, Inc., Ridgfield, Conn.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J.
 ADV. PG. 157.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave.,
 Philadelphia 18, Pa. ADV. PG. 336.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33,
 Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie,
 Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St.,
 Philadelphia 40, Pa. ADV. PG. 575.
 Furst Electronics, 3322 W. Lawrence Ave., Chicago 25,
 Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
 Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.
Grason-Stadler Co., Engineering Service Dept., 106
 Hampshire St., Cambridge 39, Mass.
 Hanover Developments, 401 E. 74th St., New York 21,
 N. Y.
 Hathaway Instruments Co., 1315 S. Clarkson St., Denver
 10, Colo.
INDUSTRIAL CONTROL CO., Straight Path & Arlington
 Ave., Wyandanch, N. Y. ADV. PG. 599.
 International Research Associates, 2221 Warwick Ave.,
 Santa Monica, Calif.
 James Vibrapow Co., 4036 N. Rockwell St., Chicago
 18, Ill.
 Jersey City Technical Laboratory, 880 Bergen Ave.,
 Jersey City 6, N. J.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego
 10, Calif. ADV. PG. 365.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleve-
 land 15, Ohio. ADV. PG. 72.
 Kuljian Corp., Electronics Div., 1200 N. Broad St.,
 Philadelphia 21, Pa.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St.,
 Boston 14, Mass. ADV. PG. 38, 39.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia
 30, Pa.
 Lesa, Via Bergamo 21, Milan, Italy.
LISTON-BECKER INSTRUMENT CO., INC., 649 Hope
 St., Springdale, Stamford, Conn. ADV. PG. 608.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New
 York 55, N. Y. ADV. PG. 437.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J.
 ADV. PG. 127.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa,
 Okla.
 Miller Corp., William, 325 N. Halstead Ave., Pasadena
 8, Calif.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box
 997, Schenectady, N. Y. ADV. PG. 611.
 Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago
 25, Ill.
 Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
 Philbrick Researches, Inc., George A., 230 Congress St.,
 Boston 10, Mass.
 Photocon Research Products, 421 N. Foothill Blvd.,
 Pasadena, Calif.
 Photron Instrument Co., 6516 Detroit Ave., Cleveland
 2, Ohio.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22,
 N. Y.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd.,
 Playa del Rey, Calif.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St.,
 Skokie, Ill.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1,
 Calif.
SANBORN CO., Industrial Div., 39 Osborn St., Cam-
 bridge 39, Mass. ADV. PG. 513.
 Servo-Tek Products Co., Inc., 1086 Goffe Rd., Haw-
 thorne, N. J.
 Southwest Engineering & Mfg. Co., P. O. Box 3325, San
 Diego 3, Calif.
 Southwestern Industrial Electronics Co., 2831 Post Oak
 Rd., P. O. Box 13058, Houston 19, Texas.
 Spar Engineering & Development Inc., S & Paxson Aves.,
 Wyncote, Pa.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Tektronix, Inc., P. O. Box 831, Portland, Ore.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

AMPLIFIERS—Decade

Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 146.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Coast Coil Co., 5332 W. Washington Blvd., Los Angeles 16, Calif.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
Furst Electronics, 3322 W. Lawrence Ave., Chicago 25, Ill.
Gulton Mfg. Corp., Metuchen, N. J.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 72.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.

AMPLIFIERS—Differential

AMERICAN ELECTRONIC LABS., INC., 641 Arch St., Philadelphia 6, Pa. ADV. PG. 528.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Boehme, Inc., H. O., 915 Broadway, New York 10, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Edin Co., Inc., 207 Main St., Worcester, Mass.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
Furst Electronics, 3322 W. Lawrence Ave., Chicago 25, Ill.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif.
Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Rollin Co., 2010 N. Lincoln Ave., Pasadena 3, Calif.
Spar Engineering & Development Inc., S & Paxson Aves., Wyncote, Pa.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

AMPLIFIERS—f-m & a-m Antenna

Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
Electro-Voice, Inc., Buchanan, Mich.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Gates Radio Co., Quincy, Ill.
Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Rust Industrial Co., 608 Willow St., Manchester, N. H.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

AMPLIFIERS—Facsimile

Acme Telectronix Div., NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.

Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
Northeastern Engineering Inc., Manchester, N. H.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 384.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

AMPLIFIERS—i-f

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
SICKLES, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass. ADV. PG. 357.
Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
Video Corp. of America, 229 W. 28th St., New York 1, N. Y.

AMPLIFIERS—Keying

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Erco Radio Labs, Inc., E. Stewart Ave., Garden City, N. Y.
Gates Radio Co., Quincy, Ill.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

AMPLIFIERS—Logarithmic

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
Thompson Products Inc., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio.

AMPLIFIERS—Magnetic

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 202, 203.
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 119.
American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 558.
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
Cycle Electronics Laboratories, 356 Glenwood Ave., East Orange, N. J.
D & R Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
ECLIPSE PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
Industrial Transformer Co., Gouldsboro, Pa.
Jobbins Electronic Enterprises, Menlo Park, Calif.
Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 493.
Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
Librascope, Inc., 1607 Flower St., Glendale 1, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 437.
Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
MAGNETICS, INC., Box 230-A, Butler, Pa. ADV. PG. 561.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
Mt. Vernon Division Transformer Co., 201 S. Third Ave., Mt. Vernon, N. Y.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.
Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
Telesivo Corp., 7466 W. Irving Park Road, Chicago 34, Ill.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 412, 413.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
VICKERS ELECTRIC DIVISION, Vickers, Inc., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 376.
Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
Walland-Pierce Corp., 1928 Pacific Coast Highway, Lomita, Calif.
Wana Laboratories, 296 Columbus Ave., Boston 16, Mass.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

AMPLIFIERS—Medical Instrument

AMERICAN ELECTRONIC LABS., INC., 641 Arch St., Philadelphia 6, Pa. ADV. PG. 528.
Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
Edin Co., Inc., 207 Main St., Worcester, Mass.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Electrodyn Co., Endicott St., Norwood, Mass.
Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.
ELECTRONIC TUBE CORP., 1800 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
Electro-Physical Laboratories, Inc., 65 Harvard Ave., Stamford, Conn.
Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
Hanover Developments, 401 E. 74th St., New York 21, N. Y.

Instrument Co., 1315 S. Clarkson St., Denver
 Research Associates, 2221 Warwick Ave.,
 Electronics Co., 9810 Anza Ave., P. O. Box 338,
 Inc., 21 N. 3rd St., Minneapolis, Minn.
 Mfg. Co., 2106 Berwyn Ave., Chicago 25,
ALTER CORP., 198 Albion Ave., Paterson 2,
 2056 E. Fourth St., Cleveland 15, Ohio.
ANIA TESTING LABORATORY, Doylestown,
 Instrument Co., 6516 Detroit Ave., Cleveland 2,
 Instruments, 60 Greenpoint Ave., Brooklyn 22,
 Instrument Co., Inc., 307 Culver Blvd.,
 Counter Laboratories, Inc., 5122 W. Grove St.,
 Instrument Development Labs., 2337 W. 67th
 CO., Industrial Div., 39 Osborn St., Cam-
 Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Products Corp., 46 Oliver St., Newark 1,
 Corp., 7466 W. Irving Park Road, Chicago 34,
RS—Microwave
RS—Microwave Radar
Microwave Accessories
RS—Musical Instrument
 tronic Corp., 105 Romana St., San Antonio 1,
 Electronics Co., 5024 Elm St., Skokie, Ill.
 Systems, Inc., 555 Marion Rd., Columbus 7,
 Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Benton Harbor, Mich. ADV. PG. 486.
 ics Corp., 2432 Grand Concourse, New
 N. Y.
 Bergamo 21, Milan Italy.
 tronics Co., 9810 Anza Ave., P. O. Box 338,
 Mfg. Co., 2106 Berwyn Ave., Chicago 25,
 Co., 227 N. Water St., Milwaukee 2, Wis.
 Audio Products Co., 6824 Lexington Ave.,
 38, Calif.
 ries, 1702 Wayne St., Toledo 9, Ohio.
 y Co., Inc., Mark, 32-28 49th St., Long
 y 3, N. Y.
 arlson Co., Rochester 3, N. Y.
 ics Products Corp., 46 Oliver St., Newark 1,
 Co., 4700 W. Walton St., Chicago 51, Ill.
 ctric Co., 1900 Clark St., Racine, Wis.
 p., Rudolph, North Tonawanda, N. Y.
RS—Narrow-Band i-f
 J. L. A., P. O. Box 529, La Jolla, Calif.
RS—Null
WILLIAMSON, 235 Fairfield Ave., Upper
 ENGINEERING CORP., Lincoln Ave. & Pond
 1, Pa. ADV. PG. 547.
 ro-Measurement Corp., 4637 SE Hawthorne
 rtland 15, Ore.
 ent Co., 1320 S. Grand Ave., Dept. A, Los
 5, Calif.
 atories, Inc., 84-11 Rockaway Beach Blvd.,
 Beach 93, N. Y.
B, INC., 6544 N. Sheridan Rd., Chicago 26,
 PG. 609.
 p., 56 Elmwood St., Newton 58, Mass.
NSFORMER CO., INC., 1736 Weirfield St.,
 27, N. Y. ADV. PG. 219.
RADIO CO., 275 Massachusetts Ave., Cam-
 Mass. ADV. PG. 90, 91.
ACKARD CO., 395 Page Mill Rd., Palo
 f. ADV. PG. 29-34.
LABS., INC., 1090 Morena Blvd., San
 Calif. ADV. PG. 365.
 thrup Co., 444 N. 16th St., Philadelphia 30,
 Co., Inc., W. S., 33 University Rd., Cam-
 Mass.
INSTRUMENT CORP., 444 Second St., Box
 enectady, N. Y. ADV. PG. 611.
IS-HONEYWELL REGULATOR CO., Indus-
 Wayne & Roberts Aves., Philadelphia 44,
 PG. 354, 355.
ANIA TESTING LABORATORY, Doylestown,
 PG. 285.
 Hermon Hosmer, 385 Putnam Ave., Cam-
 Mass.
E, INC., 88 Merrick Rd., Amityville, N. Y.
 562.
 rt Instrument Co., 5351 Pufaski Ave.,
 ia 44, Pa.
RS—Peak Limiting
 g Corp., 9356 Santa Monica Blvd., Beverly
 if.

American Electroneering Corp., 2040 Colorado Ave.,
 Santa Monica, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.
 82, 83.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City,
 N. Y.
 Gates Radio Co., Quincy, Ill.
 Industrial Television, Inc., 359 Lexington Ave., Clifton,
 N. J.
KALBFELL LABS., INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
 ADV. PG. 562.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 Wickes Engineering & Construction Co., P. O. Box 590,
 Camden 1, N. J.
AMPLIFIERS—Photocell
 Acme Telectronix Div., NEA Service, Inc., W. Third &
 Lakeside, Cleveland 13, Ohio.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
 Hills, Calif.
 Autotron Co., The, Danville, Ill.
 Avion Instrument Corp., Div. of American Car &
 Foundry Co., 295 State Highway #17, Paramus, N. J.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland
 14, Ohio. ADV. PG. 374, 375.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 Electronic Control Corp., 1573 E. Forest St., Detroit,
 Mich.
 Farrand Optical Co., Inc., Bronx Blvd. at 238th St.,
 New York 70, N. Y.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St.,
 Philadelphia 40, Pa. ADV. PG. 575.
 Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
 Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave.,
 Bloomfield, N. J. ADV. PG. 251.
 Hoffman Engineering Corp., Anoka, Minn.
 Hogan Laboratories, Inc., 155 Perry St., New York 14,
 N. Y.
 Industrial Electronics Co., Inc., Hanover, Mass.
 Lesa, Via Bergamo 21, Milan, Italy.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New
 York 55, N. Y. ADV. PG. 437.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chi-
 cago 22, Ill.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd.,
 Playa del Rey, Calif.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike,
 New Hyde Park, N. Y. ADV. PG. 438, 439.
 Simpson Mfg. Co., Inc., Mark, 32-38 49th St., Long
 Island City 3, N. Y.
 SOS Cinema Supply Corp., 602 W. 52nd St., New
 York 19, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
 ADV. PG. 562.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-
 cago 10, Ill.
 Worner Electronic Devices, Rankin, Illinois.
AMPLIFIERS—Power
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
 Hills, Calif.
 American Electroneering Corp., 2040 Colorado Ave.,
 Santa Monica, Calif.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New
 York 13, N. Y. ADV. PG. 360.
BARKER WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7,
 Ohio.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14,
 N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
 Callhone Corp., 1041 N. Sycamore Ave., Hollywood 38,
 Calif.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax,
 N. S., Canada.
 Dumont-Airplane & Marine Instruments, Inc., Clearfield,
 Pa.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
 Douglaston, N. Y.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City,
 N. Y.
 Fairchild Recording Equipment Corp., 154th St. & 7th
 Ave., Whitestone, N. Y.
 Farmer's Engineering & Mfg. Co., Irwin, Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Fisher Radio Corp., 41 E. 47th St., New York, N. Y.

FRANKLIN ELECTRONICS, INC., 415 W. Pike St.,
 Philadelphia 40, Pa. ADV. PG. 575.
FREED TRANSFORMER CO., INC., 1763 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 219.
GALBRAITH & SON ELECTRIC CORP., C. C., 450 Ave-
 nue of the Americas, New York 11, N. Y. ADV. PG.
 542.
 Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Electronics Div., Electronics
 Park, Syracuse, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave.,
 Bloomfield, N. J. ADV. PG. 251.
 Holl Audio Inc., 5014 N. Encinta Ave., Temple City,
 Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8,
 Calif.
 Industrial Electronics Co., Inc., Hanover, Mass.
 Industrial Transformer Co., Gouldsboro, Pa.
 Interelectronics Corp., 2432 Grand Concourse, New York
 58, N. Y.
 Jowil Electronics Inc., 7945 Germantown Ave., Phila-
 delphia 18, Pa.
KALBFELL LABS., INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleve-
 land 15, Ohio. ADV. PG. 72.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts
 Ave., Cambridge 39, Mass. ADV. PG. 101.
 Loge Sound Engineers, J. M., 2171 W. Washington Blvd.,
 Los Angeles 18, Calif.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
 Inglewood, Calif.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New
 York 55, N. Y. ADV. PG. 437.
MAXSON CORP. W. L., 460 W. 34th St., New York 1,
 N. Y. ADV. PG. 144.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt.
 Carmel, Ill.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J.
 ADV. PG. 127.
 Minnesota Electronics Corp., 47 W. Water St., St.
 Paul 1, Minn.
 National Inter-Communication Systems, Inc., 1130 N.
 Milwaukee Ave., Chicago 22, Ill.
 Newcomb Audio Products Co., 6824 Lexington Ave.,
 Hollywood 38, Calif.
 Northkline Engineering Inc., Manchester, N. H.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chi-
 cago 22, Ill.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 18,
 Ill.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10,
 Calif.
 Sargent-Raymont Co., The, 1401 Middle Harbor Rd.,
 Oakland 20, Calif.
 Scott, Inc., Herman Hosmer, 385 Putnam Ave., Care-
 bridge 39, Mass.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long
 Island City 3, N. Y.
 Southwestern Industrial Electronics Co., 2831 Post Oak
 Rd., P. O. Box 13058, Houston 19, Texas.
 Standard Electronics Corp., 289 Emmet St., Newark 5,
 N. J.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
 New York 14, N. Y.
WAIKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV.
 PG. 628.
WAVEFORMS, INC., 333 Sixth Ave., New York 14,
 N. Y. ADV. PG. 596.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Western Electro-Acoustic Labs., 204 S. Beverly Drive,
 Beverly Hills, Calif.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.
AMPLIFIERS—Printed Circuit
 American Electroneering Corp., 2040 Colorado Ave.,
 Santa Monica, Calif.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Y E.
 Keefe Ave., Milwaukee 3, Wis. ADV. PG. 21-24.
DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla,
 Calif. ADV. PG. 589.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teter-
 boro, N. J. ADV. PG. 132, 133.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Geotronic Labs, Inc., Dallas 11, Texas.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Interelectronics Corp., 2432 Grand Concourse, New York
 58, N. Y.
KALBFELL LABS., INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
 Maico Co., Inc., 21 N. Third St., Minneapolis, Minn.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa
 Monica, Calif. ADV. PG. 580, 581.
 Paravox, Inc., 2056 E. Fourth St., Cleveland 15, Ohio.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38,
 Station J, Buffalo 8, N. Y. ADV. PG. 566.
RADIO CORP. OF AMERICA, Engineering Products
 Dept., Camden, N. J. ADV. PG. 295, Inside Back
 & Back Covers.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
 ADV. PG. 295, Inside Back & Back Covers.

Sprague Electric Co., 125 Marshall St., North Adams, Mass.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
Telex, Inc., Telex Park, St. Paul 1, Minn.
Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.

AMPLIFIERS—Recording

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. ADV. PG. 360.
Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave & Pond St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
Cook Laboratories, Inc., R-2, Stamford, Conn.
DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.
Edin Co., Inc., 207 Main St., Worcester, Mass.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
Gates Radio Co., Quincy, Ill.
Geotronic Labs., Inc., Dallas 11, Texas.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Holl Audio Inc., 5014 N. Encinta Ave., Temple City, Calif.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
Kinevox Corp., 116 S. Hollywood Way, Burbank, Calif.
Lesca, Via Bergamo 21, Milan, Italy.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Magnasync Mfg. Co., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
MAGNECORD, INC., 225 W. Ohio St., Chicago 10, Ill. ADV. PG. 536.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Rangertone, Inc., 73 Winthrop St., Newark 4, N. J.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
Telesivo Corp., 7466 W. Irving Park Road, Chicago 34, Ill.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
Webster Electric Co., 1900 Clark St., Racine, Wis.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

AMPLIFIERS—r-f

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
Felner Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Gates Radio Co., Quincy, Ill.
Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 430, 431.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
Transitron, Inc., 154 Spring St., New York 12, N. Y.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

AMPLIFIERS—Servo

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
Arma Corp., 254 36th St., Brooklyn 32, N. Y.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
BELOCK INSTRUMENT CORP., 13-11 111th St., College Point, N. Y. ADV. PG. 267.
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.
ECLIPSE-PIONEER DIV. BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
INDUSTRIAL CONTROL CO., Straight, Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
L & O Research & Development Corp., 315 S. 15th St., Philadelphia 2, Pa.
Lesca, Via Bergamo 21, Milan, Italy.
Macdonald Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 437.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Northeastern Engineering Inc., Manchester, N. H.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 569.
Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 426.
Servo-Tek Products Co., Inc., 1086 Goffie Rd., Hawthorne, N. J.
Spar Engineering & Development Inc., S & Paxson Aves., Wyncote, Pa.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Telesivo Corp., 7466 W. Irving Park Road, Chicago 34, Ill.
Thompson Products, Inc., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
TRANSCOIL CORP., 107 Grand St., New York 13, N. Y. ADV. PG. 461.
Transitron, Inc., 154 Spring St., New York 12, N. Y.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 376.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.

AMPLIFIERS—Strain Gage

Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
Edin Co., Inc., 207 Main St., Worcester, Mass.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
Electronic Engineering Associates, Ltd., 1048 Brittan Ave., San Carlos, Calif.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
Ellis Associates, Box 77, Pelham 65, N. Y.
Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
Hanover Developments, 401 E. 74th St., New York 21, N. Y.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HEILAND RESEARCH CORP., 150 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Photon Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Spar Engineering & Development Inc., S & Paxson Aves., Wyncote, Pa.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

AMPLIFIERS—Sweep

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 623.

AMPLIFIERS—Television

Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.

5955 Sepulveda Blvd., Van Nuys, Calif.
 Laboratories, Inc., Allen B., Television Trans-
 1500 Main Ave., Clifton, N. J.
 Inc., Buchanan, Mich.
 Communication Labs., Inc., 500 Washington
 Ave., N. J.
 Co., Quincy, Ill.
PRECISION LABORATORY, INC., 63 Bedford
 Eastville, N. Y. ADV. PG. 256.
 Television, Inc., 359 Lexington Ave., Clifton,
 N. J.
 Research Associates, 2221 Warwick Ave.,
 Philadelphia, Calif.
 Electronics Corp., 26th & Dickinson Sts., Phila-
 delphia, Pa.
 Electronics Inc., 7945 Germantown Ave., Phila-
 delphia, Pa.
 Engineers, Inc., 1432 N. Carlisle St., Phila-
 delphia, Pa.
 Accessory Div., A & Allegheny Ave., Phila-
 delphia, Pa.
OF AMERICA, Engineering Products Dept.,
 P. O. Box 295, Inside Back & Back
 Cover, Newark 5, N. J. ADV. PG. 295.
KENNEDY LABS, INC., 186 Massachusetts
 Street, Bridge 39, Mass. ADV. PG. 476.
 Products Co., 2329 N. Pulaski Rd., Chi-
 cago, Ill.
 Electronics Corp., 289 Emmet St., Newark 5,
 N. J.
 Phones and Cables Ltd., Connaught House,
 London, W. C. 2, England.
APPLIANCE CORP., Sherburne, N. Y.
 562.
CE, INC., 88 Merrick Rd., Amityville, N. Y.
 562.
MENT CO., 50 Paterson Ave., East Ruther-
 ford, N. J. ADV. PG. 623.
 Inc., 460 North Ave., New Rochelle, N. Y.
SOCIATES, 990 Varian St., San Carlos,
 Calif. ADV. PG. 392, 393.

S—Ultrasonic

UMENTS, INC., 20-21 Wagaraw Rd., Fair-
 field, Conn. ADV. PG. 515.
 Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
 Electronic Sales Co., 23-03 45th Rd., Long
 Island City 1, N. Y.
ELECTRIC CO., Apparatus Sales Div., 1 River
 Street, West Nyack 5, N. Y. ADV. PG. 1-18.
 Corp., Metuchen, N. J.
LABS, INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
INSTRUMENTS, 3868 Carnegie Ave., Cleve-
 land 10, Ohio. ADV. PG. 72.
INSTRUMENT CO., 580 Massachusetts
 Street, Bridge 39, Mass. ADV. PG. 101.
 Engineering Laboratory, Inc., 320 Water St.,
 Boston 1, N. Y.
 Seas Ltd., Century House, Shaftesbury Ave.,
 London, W. C. 2, England.
MFG. CO., Equipment Sales Div., Waltham
 ADV. PG. 420.
 Laboratories, 1240 Main St., Hartford 3,
 Conn.
 Hermon Hosmer, 385 Putnam Ave., Cam-
 bridge 39, Mass.
Y INSTRUMENT CORP., 533 Main St.,
 Boston 1, Mass. ADV. PG. 97, 447.
 Equipment Mfg. Co., Inc., 345 Hudson St.,
 New York 14, N. Y.

S—Vibration Pickup

on Corp., Pacific Division, 11600 Sherman
 Hollywood, Calif.
ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
TRONICS CO., 3405 Perkins Ave., Cleve-
 land 10, Ohio. ADV. PG. 374, 375.
 Physical Corp., P. O. Box 6216, Pine
 Bluff, Okla.
 Engineering Corp., 300 N. Sierra Madre
 Pasadena 15, Calif.
 Laboratories, Inc., 84-11 Rockaway Beach Blvd.,
 Beach 93, N. Y.
ELECTRONICS, INC., 415 W. Pike St.,
 Philadelphia 40, Pa. ADV. PG. 575.
 Co., Quincy, Ill.
MAGNETICS, INC., 135 Bloomfield Ave.,
 Newark 1, N. J. ADV. PG. 251.
ADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.
 Corp., Metuchen, N. J.
SEARCH CORP., 130 E. 5th Ave., Denver 9,
 Colo. ADV. PG. 552.
 Electronics, Inc., 8060 Wheeler St., De-
 troit 1, Mich.
LABS, INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
 Inc., 21 N. 3rd St., Minneapolis, Minn.
 Geophysical Lab., 3400 S. Harvard, Tulsa,
 Okla.
 William, 325 N. Halstead St., Pasadena 8,
 Calif.
 Co., Ltd., Beckenham, Kent, England.
OF AMERICA, Engineering Products Dept.,
 P. O. Box 295, Inside Back & Back
 Cover, Newark 5, N. J.
 1702 Wayne St., Toledo 9, Ohio.

SANBORN CO., Industrial Div., 39 Osborn St., Cam-
 bridge 39, Mass. ADV. PG. 513.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cam-
 bridge 39, Mass.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike,
 New Hyde Park, N. Y. ADV. PG. 438, 439.
 Southwestern Industrial Electronics Co., 2831 Post Oak
 Rd., P. O. Box 13058, Houston 19, Texas.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.
 Televisio Corp., 7466 W. Irving Park Road, Chicago 34,
 Ill.

AMPLIFIERS—Wideband

Airmec Ltd., High Wycombe, Buckinghamshire, England.
AMERICAN ELECTRONIC LABS, INC., 641 Arch St.,
 Philadelphia 6, Pa. ADV. PG. 528.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave.,
 Cambridge 39, Mass. ADV. PG. 302.
 Audio Products Corp., 2265 Westwood Blvd., Los Angeles
 64, Calif.
BALLANTINE LABORATORIES, INC., Boonton, N. J.
 ADV. PG. 146.
 Beva Laboratory, P. O. Box 478, Trenton 9, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
 British Electronic Sales Co., 23-03 45th Rd., Long
 Island City 1, N. Y.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.
 82, 83.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J.
 ADV. PG. 516.
 DuMont Laboratories, Inc., Allen B., Instrument Div.,
 760 Bloomfield Ave., Clifton, N. J.
 Dynamic Electronics of New York, Inc., 73-39 Wood-
 haven Blvd., Forest Hills, N. Y.
 Eldico Of New York, Inc., 44-31 Douglaston Pkwy.,
 Douglaston, N. Y.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 Engineering Research Associates, Div. of Remington
 Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St.,
 Philadelphia 40, Pa. ADV. PG. 575.
 Furst Electronics, 3322 W. Lawrence Ave., Chicago 25,
 Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.
 Hanover Developments, 401, E. 74th St., New York 21,
 N. Y.
 Huggins Laboratories, 734 Hamilton Ave., Menlo Park,
 Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8,
 Calif.
 Industrial Television, Inc., 359 Lexington Ave., Clifton,
 N. J.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Phila-
 delphia 46, Pa.
KALBFELL LABS, INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts
 Ave., Cambridge 39, Mass. ADV. PG. 101.
LINEAR EQUIPMENT LABS., Brightwater Place, Mas-
 sachusetts, N. Y. ADV. PG. 624.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Phila-
 delphia 21, Pa.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J.
 ADV. PG. 127.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
 Brooklyn 11, N. Y. ADV. PG. 108, 109.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St.,
 Skokie, Ill.
 Radiation Instrument Development Labs., 2337 W. 67th
 St., Chicago 36, Ill.
RADIO CORP. OF AMERICA, Engineering Products
 Dept., Camden, N. J. ADV. PG. 295, Inside Back
 & Back Covers.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cam-
 bridge 39, Mass.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike,
 New Hyde Park, N. Y. ADV. PG. 438, 439.
SPENCER-KENNEDY LABS, INC., 186 Massachusetts
 Ave., Cambridge 39, Mass. ADV. PG. 476.
 Standard Electronics Corp., 289 Emmet St., Newark 5,
 N. J.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.
TECHNOLOGY INSTRUMENT CORP., 533 Main St.,
 Acton, Mass. ADV. PG. 97, 447.
 Tektronix Inc., P. O. Box 831, Portland 7, Ore.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
 ADV. PG. 562.
TEL-INSTRUMENT CO., 50 Paterson Ave., East Ruther-
 ford, N. J. ADV. PG. 623.
 Transitor, Inc., 154 Spring St., New York 12, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
 New York 14, N. Y.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 U. S. Electronic Co., 262 Canner St., New Haven 11,
 Conn.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y.
 ADV. PG. 596.
 White Industries, Inc., 421 W. 54th St., New York 19,
 N. Y.

ANALOGS
 See Machines, Electronic Computing

ANALYZERS—Audio Amplifier
 Advanced Electronics, Inc., 94 Silas Deane Highway,
 Rocky Hill, Conn.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
 Hills, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside,
 N. Y. ADV. PG. 395.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo
 Alto, Calif. ADV. PG. 29-34.
MAGNAVOX CO., The Components Div., Fort Wayne 4,
 Ind. ADV. PG. 328.
 Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second
 Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Railway Communications, Inc., Smith Rd. & Glenwood,
 Raytown, Mo.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y.
 ADV. PG. 596.

ANALYZERS—Capacitor

AEROVOX CORP., 740 Belleville Ave., New Bedford,
 Mass. ADV. PG. 202, 203.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
ELECTRO-TECH EQUIPMENT CO., 55 Lisenard St.,
 New York 13, N. Y. ADV. PG. 522.
KALBFELL LABS, INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19,
 Mass.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30,
 Pa.
 Mallory & Co., Inc., P. R., 3029 E. Washington St.,
 Indianapolis 6, Ind.
 Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
 Pa. ADV. PG. 35.
 Sprague Electric Co., 125 Marshall St., North Adams,
 Mass.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.
 Western Sound & Electric Labs., Inc., 805 S. Fifth St.,
 Milwaukee 4, Wis.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

ANALYZERS—Circuit

ADVANCE ELECTRONICS CO., 451 Highland Ave.,
 Passaic, N. J. ADV. PG. 621.
 Cole Instrument Co., 1320 S. Grand Ave., Dept A, Los
 Angeles 15, Calif.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Instrument Laboratories, 315 W. Walton Place, Chicago
 10, Ill.
 Jersey City Technical Laboratory, 880 Bergen Ave.,
 Jersey City 6, N. Y.
 Kuljian Corp., Electronics Div., 1200 N. Broad St.,
 Philadelphia 21, Pa.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19,
 Mass.
 Precision Apparatus Co., Inc., 92-27 Horace Harding
 Blvd., Elmhurst, N. Y.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
 Pa. ADV. PG. 35.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.
 Supreme, Inc., Box E-552, Greenwood, Miss.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868,
 Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

ANALYZERS—Coincidence

American Machine & Foundry Co., Electronics Div., 1085
 Commonwealth Ave., Boston 15, Mass.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 302.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26,
 Ill. ADV. PG. 609.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 Macdonald Co., Inc., W. S., 33 University Rd., Cam-
 bridge 38, Mass.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Phila-
 delphia 46, Pa.
 Radiation Instrument Development Labs., 2337 W. 67th
 St., Chicago 36, Ill.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
 ADV. PG. 562.

ANALYZERS—Frequency

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleve-
 land 14, Ohio. ADV. PG. 374, 375.
 Feiler Engineering Co., 8026 N. Monticello Ave.,
 Skokie, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
 ADV. PG. 400, 401.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts
 Ave., Cambridge 39, Mass. ADV. PG. 101.
 Malco Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New
 York 4, N. Y. ADV. PG. 385.

PANORAMIC RADIO PRODUCTS, INC., 10 Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Western Electro-Acoustic Labs., 204 S. Beverly Drive, Beverly Hills, Calif.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

ANALYZERS—Gas

Applied Physics Corp., 362 W. Colorado St., Pasadena 1, Calif.
 Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Gow-Mac Instrument Co., 22 Lawrence St., Newark 5, N. J.
 Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 LISTON-BECKER INSTRUMENT CO., INC., 649 Hope St., Springfield, Stamford Conn. ADV. PG. 608.
 Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Tallier & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
 VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

ANALYZERS—Harmonic

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.
 EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 PANORAMIC RADIO PRODUCTS, INC., 10 Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

ANALYZERS—Intermodulation

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 130.
 PANORAMIC RADIO PRODUCTS, INC., 10 Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

ANALYZERS—Magnetic

LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.

ANALYZERS—Microwave Radar
See Microwave Accessories**ANALYZERS—Noise**

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

ANALYZERS—Servo

Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
 KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.

ANALYZERS—Spectrum

Airborne Electronics Co., Metropolitan Airport Hangar No. 6, Van Nuys, Calif.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 Beva Laboratory, P. O. Box 478, Trenton 9, N. J.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Garrod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Jarrel-Ash Co., 165 Newbury St., Boston 16, Mass.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland 3, Ohio.
 Northeastern Engineering, Inc., Manchester, N. H.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 108, 109.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 Sierra Electronic Corp., San Carlos, Calif.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Weston Laboratories, Inc., Harvard, Mass.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.

ANALYZERS—Surface Analyzers & Comparators

Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Menlo Research Laboratory, Menlo Park, Calif.
 Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.

ANALYZERS—Ultrasonic

EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

ANALYZERS—Vibration

Advanced Electronics, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
 M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 474.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Miller Corp., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

ANALYZERS—Video

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 108, 109.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350

ANALYZERS—Wave

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.
 EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 GENERAL RADIO CORP., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Gerber Scientific Instrument Co., 89 Spruce St., Hartford 1, Conn.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

ANNEALERS—Glass

Dispatch Oven Co., Minneapolis, Minn.
 Forter-Teichmann Co., Clark Bldg., Pittsburgh, Pa.
 Lydon Bros., Hackensack, N. J.
 STEINER-IVES CO., Springfield Rd., Union, N. J. ADV. PG. 304.

ANTENNA DRAG UNITS

Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.

ANTENNA FAIRLEADS

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 RoFan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.

ANTENNA FEED SYSTEMS

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 Gates Radio Co., Quincy, Ill.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
 MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 PRODELIN, INC., 307 Bergen Ave., Kearny, N. J. ADV. PG. 306.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Standard Electronics Corp., 289 Emmet St., Newark, N. J.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S.E. 10, England.

INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
 Inc., 154 Spring St., New York 12, N. Y.
 Engineering & Construction Co., P. O. Box 590,
 1, N. J.
 Co., E. Market St. & Penna. R. R., West
 Chester, Pa.
 ASSOCIATES DIV. OF THE GABRIEL CO.,
 St., Norwood, Mass. ADV. PG. 286.

PEDESTALS—Gear Driven Radar

Machine & Foundry Co., Electronics Div., 1085
 Wealth Ave., Boston 15, Mass.
 Metal Stamping Co., Castor & Kensington Aves.,
 Philadelphia 24, Pa.
 INSTRUMENT CORP., 13-11 111th St., College
 Point, N. Y. ADV. PG. 267.
 ENGINEERING CORP., Lincoln Ave. & Pond
 St., Pa. ADV. PG. 547.
 Co., 5955 Sepulveda Blvd., Van Nuys, Calif.
 METALCRAFT CORP., Electronic Div., 14806
 St., Van Nuys, Calif. ADV. PG. 573.
 CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Co., 5660 59th St., Maspeth 78, N. Y.
 Electronic Products Corp., 46 Oliver St., Newark 1,
 N. J.

Inc., 154 Spring St., New York 12, N. Y.
 ASSOCIATES DIV. OF THE GABRIEL CO.,
 St., Norwood, Mass. ADV. PG. 286.

REFLECTORS—Radar Parabolic

Electronic Products, Inc., 312 Quincy Ave.,
 9, Mass.
 CORP., 363 E. 75th St., Chicago 19, Ill. ADV.
 PG. 556.
 ENGINEERING CORP., Lincoln Ave. & Pond
 St., Pa. ADV. PG. 547.
 Co., 32-40 57th St., Woodside, N. Y.
 Co., 5955 Sepulveda Blvd., Van Nuys, Calif.
 METALCRAFT CORP., Electronic Div., 14806
 St., Van Nuys, Calif. ADV. PG. 573.
 Radar Products, 1041 N. Pulaski Rd., Chicago
 18, Ill.

& CUMING, INC., 869 Washington St., Can-
 field, N. J. ADV. PG. 305.
 Division Co., Inc., 1041 Forbes St., Pittsburgh
 19, Pa.

ELECTROSONICS, INC., 32 W. 22nd St.,
 New York 10, N. Y. ADV. PG. 568.
 Products Co., 41 Union St., Manchester, N. H.
 Co., D. S., Cohasset, Mass.
 Instrument & Electronics Mfg. Corp., GPO Box
 Brooklyn 1, N. Y.
 Products Co., 3547 W. Montrose Ave., Chicago 18,
 Ill.

TEXTILE CORP., 647 E. First Ave., Roselle,
 Ill. ADV. PG. 464.
 INC., 307 Bergen Ave., Kearny, N. J. ADV.
 PG. 547.

Co., 52 E. 19th St., New York 3, N. Y.
 P. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.

MFG. CO., Equipment Sales Div., Waltham
 1, Mass. ADV. PG. 420.
 of California Co., Gillespie Airport, Santee,
 California, Pa.
 Co., Third St., North Wales, Pa.
 Co., Inc., C. W., 236 Pearl St., Somerville 45,
 Mass.
 Instrument Co., 1440 Commercial St., East
 18, Mass.
 ASSOCIATES DIV. OF THE GABRIEL CO.,
 St., Norwood, Mass. ADV. PG. 286.

ROTATORS

Co., Lake Park Blvd., Alliance, Ohio.
 Corp., 200 Central Ave., Newark 4, N. J.
 Electric Corp., South Plainfield, N. J.
 O., E. F., Waseca, Minn. ADV. PG. 404-407.
 Electronics Inc., Rockville, Conn.
 Co., Accessory Div. A & Allegheny Ave., Phila-
 delphia 34, Pa.
 Co., The, 3455 Vega Ave., Cleveland 13, Ohio.
 Products, Inc., Electronics Div., 2196 Clark-
 wood Ave., Cleveland 3, Ohio.
 Co., Griggsville, Ill.

TOWERS & SUPPORTS

Co., P. O. Box 152, Redwood City, Calif.
 Inc., Mineral Wells, Texas.
 Manufacturing Co., Evansville, Wis.
 Div. of Blaw-Knox Co., Farmers Bank Bldg.,
 22, Pa.
 Co., 2118 E. 55th St., Cleveland 3, Ohio.
 Co., 32-40 57th St., Woodside, N. Y.
 Co., Ellenville, N. Y.
 Co., Ideco Div., 875 Michigan Ave.,
 8, Ohio.
 Co., 908 State St., Racine, Wis.
 Division Co., Inc., 1041 Forbes St., Pittsburgh
 19, Pa.
 Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Electronics Inc., Rockville, Conn.
 LATOR CO., INC., Radio Specialties Div., 32
 St., Le Roy, N. Y. ADV. PG. 382, 383.

Lehigh Structural Steel Co., 17 Battery Place, New York
 4, N. Y.
 National Electric Products Co., 1356 Chamber of Com-
 merce Bldg., Pittsburgh 30, Pa.
 Philco Corp., Accessory Div., A & Allegheny Ave., Phila-
 delphia 34, Pa.
 RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave.,
 New York 60, N. Y.
 Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
 Rohn Mfg. Co., 116 Limestone, Bellevue, Peoria, Ill.
 Rostan Corp., 5660 59th St., Maspeth 78, N. Y.
 Southern Industries of Maryland, Inc., 1401 Reisterstown
 Rd., Pikesville 8, Md.
 Stainless, Inc., Third St., North Wales, Pa.
 Tel-A-Ray Enterprises Inc., Box 332, Henderson, Ky.
 Tele-Ex-Pand Products Sales Corp., P. O. Box 392
 Berwick, Pa.
 Tempo TV Products Co., 2450 Ramona Blvd., Los Angeles
 33, Calif.
 Truscon Steel Division of Republic Steel Corp., Youngs-
 town, Ohio.
 Vesto Co., Inc., 20th & Clay, North Kansas City, Mo.
 Wincharger Corp., E. 7th & Division Sts., Sioux City,
 Iowa.
 Wind Turbine Co., E. Market St. & Penna. R. R., West
 Chester, Pa.

ANTENNA TUNING UNITS

Aeronautical Communications Equipment, Inc., 3090 Doug-
 las Rd, Miami 33, Fla.
 American Electroneering Corp., 2040 Colorado Ave.,
 Santa Monica, Calif.
 ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV.
 PG. 556.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman
 Way, North Hollywood, Calif.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.
 82, 83.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner
 Blvd., Dallas 10, Texas.
 Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
 Erco Radio Labs, Inc., East Stewart Ave., Garden City,
 N. Y.
 Gates Radio Co., Quincy, Ill.
 RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Standard Electronics Corp., 289 Emmet St., Newark 5,
 N. J.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St.,
 New York 14, N. Y.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 Western Coil Products Co., 2993 Middlefield Rd., Palo
 Alto, Calif.

ANTENNAS—Airborne Radar Spinner

American Machine & Foundry Co., Electronics Div.,
 1085 Commonwealth Ave., Boston 15, Mass.
 Atlas Metal Stamping Co., Castor & Kensington Aves.,
 Philadelphia 24, Pa.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
 St., Bristol 1, Pa. ADV. PG. 547.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 DOUGLAS MICROWAVE CO., INC., 335 E. 95th St.,
 New York 28, N. Y. ADV. PG. 559.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh
 19, Pa.
 LAVOIE LABORATORIES, Morganville, N. J. ADV. PG.
 419.
 Super Electric Products Corp., 46 Oliver St., Newark
 1, N. J.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45,
 Mass.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 Tricraft Products Co., 1535 N. Ashland Ave., Chicago
 22, Ill.
 WORKSHOP ASSOCIATES, DIV. OF THE GABRIEL CO.,
 Endicott St., Norwood, Mass. ADV. PG. 286.

ANTENNAS—Aircraft Type

Aeronautical Electronics, Inc., Raleigh-Durham Airport,
 P.O. Box 6043, Raleigh, N. C.
 AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.
 329.
 American Electroneering Corp., 2040 Colorado Ave.,
 Santa Monica, Calif.
 American Machine & Foundry Co., Electronics Div.,
 1085 Commonwealth Ave., Boston 15, Mass.
 ANDREW CORP., 363 E. 75th St., Chicago 19, Ill.
 ADV. PG. 556.
 Audio Products Corp., 2265 Westwood Blvd., Los An-
 geles 64, Calif.
 Bendix Radio Division, Bendix Aviation Corp., Balti-
 more 4, Md.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.
 82, 83.
 Camfield Mfg. Co., 718 N. Seventh St., Grand Haven,
 Mich.

Electro Craft Inc., 68 Jackson St., Stamford, Conn.
 DORNE AND MARGOLIN, 30 Sylvester St., Westbury,
 N. Y. ADV. PG. 569.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St.,
 New York 28, N. Y. ADV. PG. 559.
 Fretco Television Co., Inc., 1041 Forbes St., Pitts-
 burgh 19, Pa.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave.,
 Long Island City, N. Y. ADV. PG. 535.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Land-Air, Inc., 440 W. Superior St., Chicago 10, Ill.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
 New York 4, N. Y.
 MAXSON CORP., W. L., 460 W. 34th St., New York
 1, N. Y. ADV. PG. 144.
 Mitchell Industries, Inc., P.O. Box 17, Mineral Wells,
 Texas.
 Molded Insulation Co., 335 E. Price St., Philadelphia
 44, Pa.
 National Aeronautical Corp., 180 S. Main St., Ambler,
 Pa.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena,
 Calif. ADV. PG. 226.
 Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn
 31, N. Y.
 RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Roflan Co., Corner Route 1 & Camp Meeting Rd.,
 Topsfield, Mass.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Snyder Mfg. Co., Philadelphia 40, Pa.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24,
 N. Y.
 Super Electric Products Corp., 46 Oliver St., Newark
 1, N. J.
 TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.
 PG. 326.
 Telectro Industries Corp., 35-18 37th St., Long Island
 City 1, N. Y.
 Television Laboratories, Inc., 5045 W. Lake St., Chi-
 cago 44, Ill.
 Thompson Products, Inc., Electronics Div., 2196 Clark-
 wood Ave., Cleveland 3, Ohio.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 Tricraft Products Co., 1535 N. Ashland Ave., Chicago
 22, Ill.
 Ward Products Corp., Div. of The Gabriel Co., 1148
 Euclid Ave., Cleveland 15, Ohio.
 West Coast Electronics Co., 5873 W. Jefferson Blvd.,
 Los Angeles 16, Calif.
 White Industries, Inc., 421 W. 54th St., New York
 19, N. Y.
 WORKSHOP ASSOCIATES, DIV. OF THE GABRIEL CO.,
 Endicott St., Norwood, Mass. ADV. PG. 286.
 Z & W Machine Products, Inc., Electronics Div., 5100-
 16 St. Clair Ave., Cleveland 3, Ohio.

ANTENNAS—All Wave Receiving

Camburn, Inc., 32-40 57th St., Woodside, N. Y.
 Consolidated Wire & Associated Companies, 1635 S.
 Clinton St., Chicago 16, Ill.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 DORNE AND MARGOLIN, 30 Sylvester St., Westbury,
 N. Y. ADV. PG. 569.
 Hy-Lite Antennae Inc., 242 E. 137th St., New York
 51, N. Y.
 Fretco Television Co., Inc., 1041 Forbes St., Pitts-
 burgh 19, Pa.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
 Island City, N. Y. ADV. PG. 535.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
 New York 4, N. Y.
 National Electronic Mfg. Corp., 42-08 Vernon Blvd.,
 Long Island City 1, N. Y.
 Northeastern Engineering Inc., Manchester, N. H.
 Philco Corp., Accessory Div., A & Allegheny Ave.,
 Philadelphia 34, Pa.
 Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn
 31, N. Y.
 RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
 Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
 Skyline Antennae Corp., 200 Silver St., Sharon, Pa.
 TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.
 PG. 326.
 Telrex, Inc., Asbury Park, N. J.
 Tricraft Products Co., 1535 N. Ashland Ave., Chicago
 22, Ill.
 U. H. F. Resonator Co., 224 Seventh St., Racine, Wis.
 Wind Turbine Co., E. Market St. & Penna. R. R.,
 West Chester, Pa.

ANTENNAS—Auto

Bendix Radio Division, Bendix Aviation Corp., Balti-
 more 4, Md.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 BUGGIE & CO., H. H., 726 Stanton St., Toledo, Ohio.
 ADV. PG. 422.
 Camburn, Inc., 32-40 57th St., Woodside, N. Y.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Federal Engineering Co., 37 Murray St., New York 7,
 N. Y.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
 Island City, N. Y. ADV. PG. 535.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.
Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.
Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls, N. Y.
Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio.
Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
Snyder Mfg. Co., Philadelphia 40, Pa.
Spirling Products Co., 60 Grand St., New York, N. Y.
Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.

ANTENNAS—Broadcast Station Radiators

Alpar Mfg. Co., P.O. Box 152, Redwood City, Calif.
Lingo & Son, Inc., John E., 28th St. & Buren, Camden, N. J.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Rohn Mfg. Co., 116 Limestone, Bellevue, Peoria, Ill.
Stainless, Inc., Third St., North Wales, Pa.
Truscon Steel Division of Republic Steel Corp., Youngstown, Ohio.
Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa.
Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.
WORKSHOP ASSOCIATES, DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 286.

ANTENNAS—Directional Antenna Coupling & Phasing Units

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
American Electronering Corp., 2040 Colorado Ave., Santa Monica, Calif.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
Camburn, Inc., 32-40 57th St., Woodside, N. Y.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
DORNE AND MARGOLIN, 30 Sylvester St., Westbury, N. Y. ADV. PG. 569.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
Gates Radio Co., Quincy, Ill.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
Skyline Antennae Corp., 200 Silver St., Sharon, Pa.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Tel-A-Ray Enterprises Inc., Box 332, Henderson, Ky.
Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.

ANTENNAS—Dummy Loads

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 66.
Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Budd-Stanley Co., Inc. 43-01 22nd St., Long Island City 1, N. Y.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
Federal Telecommunications Labs., Inc., 500 Washington Ave., Nutley, N. J.
Gates Radio Co., Quincy, Ill.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 440.
Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
Lynnar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 92.
Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
Shore Engineering Inc., 232 West Ave., Long Branch, N. J.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
States Co., 19 New Park Ave., Hartford 6, Conn.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
Thompson Products, Inc., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

ANTENNAS—Fixed Station Antenna Systems

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
American Electronering Corp., 2040 Colorado Ave., Santa Monica, Calif.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
DORNE AND MARGOLIN, 30 Sylvester St., Westbury, N. Y. ADV. PG. 569.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
Hy-Lite Antennae Inc., 242 E. 137th St., New York 51, N. Y.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
PRODELIN, INC., 307 Bergen Ave., Kearny, N. J. ADV. PG. 306.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Stainless, Inc., Third St., North Wales, Pa.
Torgren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
U. H. F. Resonator Co., 224 Seventh St., Racine, Wis.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ANTENNAS—f-m Receiver

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
Camburn, Inc., 32-40 57th St., Woodside, N. Y.
Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.

Gonset Co., 801 S. Main St., Burbank, Calif.
Hy-Lite Antennae Inc., 242 E. 137th St., New York 51, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
LaPointe Electronics Inc., Rockville, Conn.
National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.
Northeastern Engineering Inc., Manchester, N. H.
Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.
Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
Radian Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
S-C Laboratories, Inc., 37 George St., Newark 5, N. J.
Spirling Products Co., 60 Grand St., New York, N. Y.
Tel-A-Ray Enterprises Inc., Box 332, Henderson, Ky.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 326.
Telrex, Inc., Asbury Park, N. J.
Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.
U.H.F. Resonator Co., 224 Seventh St., Racine, Wis.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.

ANTENNAS—f-m Transmitter

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
DORNE AND MARGOLIN, 30 Sylvester St., Westbury, N. Y. ADV. PG. 569.
Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
Gates Radio Co., Quincy, Ill.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Northeastern Engineering Inc., Manchester, N. H.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Telemetering Associates, P.O. Box 6, Silver Spring, Md.
Telrex, Inc., Asbury Park, N. J.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 6, Calif.

ANTENNAS—Ground Plane

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
American Electronering Corp., 2040 Colorado Ave., Santa Monica, Calif.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Kennedy & Co., D. S., Cohasset, Mass.
Lysco Mfg. Co., 82 Herman St., East Rutherford, N. J.
Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 464.
Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls, N. Y.
PRODELIN, INC., 307 Bergen Ave., Kearny, N. J. ADV. PG. 306.
Snyder Mfg. Co., Philadelphia 40, Pa.
U.H.F. Resonator Corp., 224 Seventh St., Racine, Wis.
Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 6, Calif.
White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
WORKSHOP ASSOCIATES DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 286.

ANTENNAS—Indoor

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
Camburn, Inc., 32-40 57th St., Woodside, N. Y.
Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

G. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.

Co., M. A., 1169 E. 43rd St., Chicago 15, Ill.

Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.

Products Industries, 812 N. Pulaski St., Chicago 18, Ill.

Co., Accessory Div., A & Alleghany Ave., Philadelphia 34, Pa.

Mfg. Co., Inc., 113 University Place, New York 17, N. Y.

Co., 7580 Garfield Blvd., Cleveland 25, Ohio.

Co., The, 3455 Vega Ave., Cleveland 13, Ohio.

Corp. of AMERICA, Engineering Products Dept., c/o N. J. ADV. PG. 295, Inside Back & Back Cover.

Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 10, N. Y.

Co., 1130 Wisconsin Ave., Chicago 14, Ill.

Antennae Corp., 200 Silver St., Sharon, Pa.

Co., Philadelphia 40, Pa.

Products Co., 60 Grand St., New York, N. Y.

R. Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.

Oil Products Co., 2329 N. Pulaski Rd., Chicago 18, Ill.

APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 286.

Corp., 185 N. Wabash Ave., Chicago 1, Ill.

Asbury Park, N. J.

Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.

AS—Loop

Electronics, Inc., Raleigh-Durham Airport, Box 6043, Raleigh, N. C.

WILLIAMSON, 235 Fairfield Ave., Upper Merion, Pa. ADV. PG. 239.

Rio Division, Bendix Aviation Corp., Baltimore 17, Md.

Marine Div., National-Simplex-Bludworth, Inc., New York 38, N. Y.

MENT DIVISION, The George W. Borg Corp., Wis. ADV. PG. 368.

MARGOLIN, 30 Sylvester St., Westbury, N. Y. PG. 569.

Arch Lab, Inc., 1961 University Ave., Palo Alto, Calif.

ision Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.

Corp., 4-6 Radford Place, Yonkers, N. Y.

INC., EDWIN I., 155 Throop St., Chicago 12, Ill. PG. 414.

CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.

CO., INC., 1150 McBride Ave., Little Falls, N. Y. PG. 411.

Cutting Corp., 192½ Greene St., New York 13, N. Y.

J. W., 5917 S. Main St., Los Angeles 3, Calif.

ustries, Inc., P. O. Box 17, Mineral Wells, Texas.

seas Ltd., Century House, Shaftesbury Ave., W. C. 2, England.

Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.

Mfg. Co., Inc., 113 University Place, New York 17, N. Y.

UITS CORP., Glen Cove, N. Y. ADV. PG. 81.

Co., 47 Martine Ave., White Plains, N. Y.

Eric Co., 8020 S. Park Ave., Chicago 19, Ill.

Co., 2405 Armitage Ave., Chicago 47, Ill.

Co., Philadelphia 40, Pa.

Oil Products Co., 2329 N. Pulaski Rd., Chicago 18, Ill.

inding Co., 137 Walsh Ave., Newburgh, N. Y.

ric Products Corp., 46 Oliver St., Newark, N. J.

poratories, Inc., 5045 W. Lake St., Chicago 44, Ill.

, Inc., C. W., 236 Pearl St., Somerville 45, Mass.

S—Marine

Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.

Co., Rex, 1314 N.E. 17th Court, P. O. Box 100, Fort Lauderdale, Fla.

Marine Div., National Simplex-Bludworth, Inc., New York 38, N. Y.

Co., New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

ision Products, Inc., 119-01 22nd Ave., Long Island City, N. Y.

CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

Co., Ray, 40 E. Merrick Rd., Freeport, N. Y.

CO., 82 Herman St., East Rutherford, N. J.

ets Co., 3547 W. Montrose Ave., Chicago 18, Ill.

seas Ltd., Century House, Shaftesbury Ave., W. C. 2, England.

Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls, N. Y.

Co., Philadelphia 40, Pa.

Electronics Corp., 289 Emmet St., Newark 5, N. J.

Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.

Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.

ANTENNAS—Microwave
See MICROWAVE ACCESSORIES

ANTENNAS—Radar Receiving & Transmitting

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.

Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.

Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.

Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.

CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

DALMO VICTOR CO., 1414 El Camino Real, San Carlos, Calif. ADV. PG. 191.

DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.

Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.

Kennedy & Co., D. S., Cohasset, Mass.

Kent Co., F. C., 64 Howard St., Irvington, N. J.

Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.

MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.

MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.

Network Mfg. Co., 213 W. Fifth St., Bayonne, N. J.

Northeastern Engineering, Inc., Manchester, N. H.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Cover.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.

Sightmaster of California Co., Gillespie Airport, Santee, Calif.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.

TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 326.

Telrex, Inc., Asbury Park, N. J.

Terpening Co., L. H., 16 W. 61st St., New York 23, N. Y.

TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.

Torngren, Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.

Transitron, Inc., 154 Spring St., New York 12, N. Y.

Wheeler Laboratories, Inc., Great Neck, N. Y.

WORKSHOP ASSOCIATES, DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 286.

ANTENNAS—Railroad

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.

Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.

Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.

West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 6, Calif.

ANTENNAS—Rotary Beam

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.

Hy-Lite Antennae, Inc., 242 E. 137th St., New York 51, N. Y.

JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.

Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls, N. Y.

Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.

ANTENNAS—Telescopic

Camburn, Inc., 32-40 57th St., Woodside, N. Y.

Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.

Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.

Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.

Gates Radio Co., Quincy, Ill.

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

Hy-Lite Antennae, Inc., 242 E. 137th St., New York 51, N. Y.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.

Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.

Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls, N. Y.

Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill.

Snyder Mfg. Co., Philadelphia 40, Pa.

Spirling Products Co., 60 Grand St., New York, N. Y.

U.H.F. Resonator Corp., 224 Seventh St., Racine, Wis.

Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.

ANTENNAS—Television

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.

Camburn, Inc., 32-40 57th St., Woodside, N. Y.

Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.

Channel Master Co., Ellenville, N. Y.

Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank, Calif.

Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland, Ohio.

Cornell-Dubilier Electric Corp., South Plainfield, N. J.

Davis Electronics, Box 1247, Burbank, Calif.

Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

Epo Electronics, 140 Liberty St., New York, N. Y.

Federal Engineering Co., 37 Murray St., New York 7, N. Y.

Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio.

Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.

Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

Gosnet Co., 801 S. Main St., Burbank, Calif.

Hy-Lite Antennae, Inc., 242 E. 137th St., New York 51, N. Y.

I. E. Manufacturing, 325 N. Hoyme Ave., Chicago 12, Ill.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.

LaPointe Electronics Inc., Rockville, Conn.

Lingo & Son, Inc., John E., 28th St. & Buren, Camden, N. J.

Louis Bros., 3543 E. 16th St., Los Angeles 23, Calif.

Lyman Electronic Corp., 12 Cass St., Springfield, Mass.

Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.

Miller TV Antenna Co., 2840 Naomi, Burbank, Calif.

Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.

National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.

National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.

Peerless Products Industries, 812 N. Pulaski St., Chicago 18, Ill.

Philco Corp., Accessory Div., A & Alleghany Ave., Philadelphia 34, Pa.

Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.

Phoenix Electronics Inc., 50 Island St., Lawrence, Mass.

Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio.

Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Cover.

Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.

Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill.

S-C Laboratories, Inc., 37 George St., Newark 5, N. J.

Scala Radio Co., 2814 19th St., San Francisco 10, Calif.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Shore Engineering Inc., 232 West Ave., Long Branch, N. J.

Skyline Antennae Corp., 200 Silver St., Sharon, Pa.

Snyder Mfg. Co., Philadelphia 40, Pa.

Spirling Products Co., 60 Grand St., New York, N. Y.

Stainless, Inc., Third St., North Wales, Pa.

Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 326.

Tel-A-Ray Enterprises Inc., Box 332, Henderson, Ky.

Tele-Clear Corp., 185 N. Wabash Ave., Chicago 1, Ill.

Telrex, Inc., Asbury Park, N. J.

Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.

Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.

Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.

Trio Mfg. Co., Griggsville, Ill.
 U. H. F. Resonator Co., 224 Seventh St., Racine, Wis.
 Ward Products Corp., Div. of The Gabriel Co., 1148
 Euclid Ave., Cleveland 15, Ohio.
WORKSHOP ASSOCIATES, DIV. OF THE GABRIEL CO.,
 Endicott St., Norwood, Mass. ADV. PG. 286.

ANTENNAS—Television Built-in

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave.,
 Chicago 50, Ill. ADV. PG. 111.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh
 19, Pa.
 Lansky Die Cutting Corp., 192½ Greene St., New York
 12, N. Y.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadel-
 phia 21, Pa.
 Philco Corp., Accessory Div., A & Allegheny Ave., Phila-
 delphia 34, Pa.
 Square Root Mfg. Corp., 391 Saw Mill River Rd.,
 Yonkers, N. Y.
 Television Laboratories, Inc., 5045 W. Lake St., Chicago
 44, Ill.
 Tricraft Products Co., 1535 N. Ashland Ave., Chicago
 22, Ill.

ANTENNAS—Television Multiple Set

Blonder-Tongue Laboratories, Inc., 526-536 North Ave.,
 Westfield, N. J.
 Camburn, Inc., 32-40 57th St., Woodside, N. Y.
 Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
 Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Phila-
 delphia 46, Pa.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadel-
 phia 21, Pa.
 Philco Corp., Accessory Div., A & Allegheny Ave., Phila-
 delphia 34, Pa.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.
 PG. 326.

ANTENNAS—uhf & vhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG.
 329.
 American Electroneering Corp., 2040 Colorado Ave.,
 Santa Monica, Calif.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi-
 cago 50, Ill. ADV. PG. 111.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island
 City 3, N. Y.
 Camburn, Inc., 32-40 57th St., Woodside, N. Y.
 Camfield Mfg. Co., 718 N. Seventh St., Grand Haven,
 Mich.
 Canoga Corp., 5955 Supulveda Blvd., Van Nuys, Calif.
 Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
 Channel Master Co., Ellenville, N. Y.
 Clear Beam Television Antenna Co., 100 Prospect Ave.,
 Burbank, Calif.
 Communications Co., Inc., 300 Greco Ave., Coral Gables
 34, Fla.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Davis Electronics, Box 1247, Burbank, Calif.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11,
 N. Y.
 Dielectric Products Co., Inc., 125 Virginia Ave., Jersey
 City 5, N. J.
DORNE AND MARGOLIN, 30 Sylvester St., Westbury,
 N. Y. ADV. PG. 569.
 Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City,
 N. Y.
 Federal Telecommunication Labs., Inc., 500 Washing-
 ton Ave., Nutley, N. J.
 Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio.
 Fretco Television Co., Inc., 1041 Forbes St., Pitts-
 burgh 19, Pa.
 Gates Radio Co., Quincy, Ill.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford,
 Ill.
 Hy-Lite Antennae, Inc., 242 E. 137th St., New York
 51, N. Y.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12,
 Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
 Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave.,
 Brooklyn, N. Y. ADV. PG. 258, 623.
 LaPointe Electronics Inc., Rockville, Conn.
 Lingo & Son, Inc., John E., 28th St. & Buren, Camden,
 N. J.
 Louis Bros., 3543 E. 16th St., Los Angeles 23, Calif.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Phila-
 delphia 21, Pa.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
 New York 4, N. Y.
 Mark Products Co., 3547 W. Montrose Ave., Chicago
 18, Ill.
 Measurement Engineering, Ltd., Arnprior, Ontario, Cana-
 da.
 Michel Mfg. Co., 227 N. Water St., Milwaukee 2,
 Wis.
 Miller TV Antenna Co., 2840 Naomi, Burbank, Calif.
 Molded Insulation Co., 335 E. Price St., Philadelphia
 44, Pa.
 National Electric Products Co., 1356 Chamber of Com-
 merce Bldg., Pittsburgh 30, Pa.
 National Electronic Mfg. Corp., 42-08 Vernon Blvd.,
 Long Island City 1, N. Y.

Northeastern Engineering, Inc., Manchester, N. H.
 Peerless Products Industries, 812 N. Pulaski St.,
 Chicago 51, Ill.
 Penn Television Products Co., Allegheny & Trenton
 Ave., Philadelphia 34, Pa.
 Philco Corp., Accessory Div., A & Allegheny Ave.,
 Philadelphia 34, Pa.
 Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn
 31, N. Y.
 Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
PRODELIN, INC., 307 Bergen Ave., Kearny, N. J. ADV.
 PG. 306.
 Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland
 25, Ohio.
 Radiart Corp., 3455 Vega Ave., Cleveland 13, Ohio.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long
 Island City 1, N. Y.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave.,
 New York 60, N. Y.
 Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
 S-C Laboratories, Inc., 37 George St., Newark 5, N. J.
 Scala Radio Co., 2814 19th St., San Francisco 10,
 Calif.
 Schott Co., Walter L., 3225 Exposition Pl., Los
 Angeles 18, Calif.
 Shore Engineering Inc., 232 West Ave., Long Branch,
 N. J.
 Sightmaster of California Co., Gillespie Airport, Santee,
 Calif.
 Skyline Antennae Corp., 200 Silver St., Sharon, Pa.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24,
 N. Y.
 Snyder Mfg. Co., Philadelphia 40, Pa.
 Spirling Products Co., 60 Grand St., New York, N. Y.
 Stainless, Inc., Third St., North Wales, Pa.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.
 PG. 326.
 Tel-A Enterprises Inc., Box 332, Henderson, Ky.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
 ADV. PG. 562.
 Telrex Inc., Asbury Park, N. J.
 Television Laboratories, Inc., 5045 W. Lake St., Chi-
 cago 44, Ill.
 Tricraft Products Co., 1535 N. Ashland Ave., Chicago
 22, Ill.
 Trio Mfg. Co., Griggsville, Ill.
 U. H. F. Resonator Co., 224 Seventh St., Racine, Wis.
 Walnut Machine Co., 1529 S. Walnut St., South Bend
 14, Ind.
 Ward Products Corp., Div. of The Gabriel Co., 1148
 Euclid Ave., Cleveland 15, Ohio.
 Wells & Winegard, Burlington, Iowa.
 West Coast Electronics Co., 5873 W. Jefferson Blvd.,
 Los Angeles 6, Calif.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wind Turbine Co., E. Market St. & Penna. R. R.,
 West Chester, Pa.

ATTENUATORS

Blonder-Tongue Laboratories, Inc., 526-536 North Ave.,
 Westfield, N. J.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long
 Island City 1, N. Y.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
CENTRAL DIV. OF GLOBE-UNION, INC., 914 Y E.
 Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Cinema-Television Ltd., Worsley Bridge Rd., London,
 S.E. 26, England.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG.
 236, 237.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.
 PG. 79.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J.
 ADV. PG. 516.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chi-
 cago 51, Ill.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hill-
 side, N. J.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside,
 N. Y. ADV. PG. 395.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie,
 Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood,
 Calif. ADV. PG. 525.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Phila-
 delphia 46, Pa.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
KALBFELL LABS., INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J.
 ADV. PG. 400, 401.
 Leeds & Northrup Co., 444 N. 16th St., Philadel-
 phia 30, Pa.
 Lesa, Via Bergamo 21, Milan, Italy.
 Mallory & Co., Inc., P. R., 3029 E. Washington St.,
 Indianapolis 6, Ind.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 130.
 Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44,
 Ill. ADV. PG. 92.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.

Rutherford Electronics Co., 3707 S. Robertson Blvd.,
 Culver City, Calif.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
 Pa. ADV. PG. 35.
 Standard Electronics Corp., 289 Emmet St., Newark
 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
STODDART AIRCRAFT RADIO CORP., 6644 Santa
 Monica Blvd., Hollywood 38, Calif. ADV. PG. 615.
 Tech Laboratories, Inc., Bergen & Edsall Blvd., Pali-
 sades Park, N. J.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.
 PG. 326.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd.,
 Thomaston, Conn.
 Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
 ADV. PG. 562.
TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East
 Rutherford, N. J. ADV. PG. 623.
TRAD TELEVISION CORP., 1001 First Ave., Asbury
 Park, N. J. ADV. PG. 234.
 White Industries, Inc., 421 W. 54th St., New York
 19, N. Y.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11,
 N. Y.

ATTENUATORS—Microwave
ATTENUATORS—Microwave, Adjusted & Cal-
ibrated
ATTENUATORS—Microwave Coaxial Fixed
ATTENUATORS—Microwave Step
 See Microwave Accessories

AUDIOMETERS
 See Instruments—Electrical Measuring

AUTO RADIO CONTROLS
 See Controls, Radio Remote

BAFFLES—Speaker

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
 Hills, Calif.
 Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7,
 Ohio.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14,
 N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Butler Mfg. Co., Inc., B. B., 3150 Randolph St., Bell-
 wood, Ill.
 Davis & Co., J. W., 9212 Denton Drive, Dallas, Texas.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 Electro-Voice, Inc., Buchanan, Mich.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York
 56, N. Y.
 Hawley Products Co., St. Charles, Ill.
 Illinois Wood Products Corp., 1656 N. Besly Court,
 Chicago 22, Ill.
 Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
 Lansing Sound, Inc., James B., 2439 Fletcher Drive,
 Los Angeles 26, Calif.
 Lansky Die Cutting Corp., 192½ Greene St., New
 York 12, N. Y.
 Louis Bros., 3543 E. 16th St., Los Angeles 23, Calif.
 McIntosh Engineering Laboratory, Inc., 320 Water St.,
 Binghamton, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
 Inglewood, Calif.
 Newcomb Audio Products Co., 6824 Lexington Ave.,
 Hollywood 38, Calif.
 Olesen Co., Otto K., 1534 Cahuenga, Hollywood 28,
 Calif.
PAR-METAL PRODUCTS CORP., 32-62 49th St., Long
 Island City 3, N. Y. ADV. PG. 160.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
 Ill. ADV. PG. 516.
 Philmore Mfg. Co., Inc., 113 University Place, New
 York 3, N. Y.
 Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long
 Island City 3, N. Y.
 Stromberg-Carlson Co., Rochester 3, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensington
 Ave., White Plains, N. Y. ADV. PG. 464.
UTAH RADIO PRODUCTS CO., INC., 1123 E. Franklin
 St., Huntington, Ind. ADV. PG. 490.
 Vibraloc Corp., 425 Bush St., San Francisco 8, Calif.
 Wuriltz Co., Rudolph, North Tonawanda, N. Y.

BARRETTERS
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 130.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.

BASES—Relay
 See also Mountings

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
 Mass. ADV. PG. 204, 205.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.

PRODUCTS CO., 233 E. 146th St., New N. Y. ADV. PG. 618.
 AN & CO., L. L., Route 6 at Lodi Circle, J. ADV. PG. 125.
 SEAL PRODUCTS CO., 29-37 South 6th St., N. J. ADV. PG. 235.
 Job Molding & Tool Co., 1200 Southard St., N. J.
 Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Telephones & Cables Ltd., Connaught House, London, W.C. 2, England.

ES—Dry

ary Co., 59 Pearl St., Brooklyn 1, N. Y.
 Battery Co., 200 Crooks Ave., Clifton, N. J.
 BATTERY CO., Battery Div., Freeport, Ill. 539.
 nics Corp., 2432 Grand Concourse, New N. Y.
 SWITCHBOARD & SUPPLY CO., 6650 S. ve, Chicago 38, Ill. ADV. PG. 568.
 CO., THE, Components Div., Fort Wayne 4, V. PG. 328.
 Battery Co., Wausau, Wis.
 CARBON CO., Division of Union Carbide & Corp., 30 E. 42nd St., New York 17, N. Y. 331.
 ies, Inc., Electrical Div., 275 Winchester y Haven 4, Conn.
 , Accessory Div., A & Allegheny Ave., ia 34, Pa.
 P. OF AMERICA, Tube Dept., Harrison, N. J. 295, Inside Back & Back Covers.
 Co., 212 E. Washington Ave., Madison, Wis.
 BATTERY CO., Madison 4, Wisconsin. ADV.
 Storage Battery Co., 200 Carnegie Hall, Cleve- Ohio.
 Repeating Arms Co., Div. of Olin Industries, y Haven, Conn.

ES—Mercury

CO., THE, Components Div., Fort Wayne 4, V. PG. 328.
 Co., Inc., P. R., 3029 E. Washington St., is 6, Ind.

ES—Standard Cell

ary Co., 59 Pearl St., Brooklyn 1, N. Y.
 SWITCHBOARD & SUPPLY CO., 6650 S. ve, Chicago 38, Ill. ADV. PG. 568.
 RESEARCH INSTRUMENT CORP., 9 Elm Vernon, N. Y. ADV. PG. 617.
 Storage Battery Co., 200 Carnegie Hall, Cleve- Ohio.

ES—Storage

Storage Battery Co., 42 S. 15th St., Philadel- a.
 Batteries, Inc., Bush Terminal Bldg. No. 4, th St., Brooklyn 32, N. Y.
 al Batteries, Inc., 35 Neoga St., Depew, mium Battery Corp., Easthampton, Mass.
 Storage Battery Co., 200 Carnegie Hall, Cleve- Ohio.
 ELECTRIC CORP., 105 Chambers St., New N. Y. ADV. PG. 619.

ES—Storage Nonspill

Delaware, Ohio.
 Storage Battery Co., 42 S. 15th St., Phila- Pa.
 Batteries Inc., Bush Terminal Bldg., No. 4, rty-Fifth St., Brooklyn 32, N. Y.
 nce Industries, Box 10066 International os Angeles 45, Calif.
 al Batteries, Inc., 35 Neoga St., Depew, mium Battery Corp., Easthampton, Mass.
 Storage Battery Co., 200 Carnegie Hall, Cleve- Ohio.
 ELECTRIC CORP., 105 Chambers St., New N. Y. ADV. PG. 619.

ES—CHARGERS

ron Tube
 ge Driven
 illic Oxide
 or Generator
 ible
 mium
 ELECTRIC CORP., 31 Water St., Cuba, N. Y. DV. PG. 453.
 PRODUCTS CO., Middle River, Baltimore 20, 3, ADV. PG. 119.
 ELECTRONIC LABS., INC., 641 Arch St., ia 6, Pa. 6. ADV. PG. 528.
 TELEVISION & RADIO CO., 300 E. Fourth Paul 1, Minn. 6. ADV. PG. 278.
 2037 W. Division St., Chicago 22, Ill. 6.
 Electric Sales Corp., 1033 W. Van Buren St., Ill. 6.
 ric Co., 4353 Duncan Ave., St. Louis, Mo.

Barry Electronics Corp., 136 Liberty St., New York 6, N. Y. 6.
 Bart-Messing Corp., 227 Main St., Belleville 9, N. J. 6.
 Bludworth Marine Div., National Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. 4-6.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 2-3-4-6.
 Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 2-4-6.
 BRADLEY LABS., INC., 82 Meadow St., New Haven 10, Conn. 6. ADV. PG. 170.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. 1-3-5.
 CONNECTICUT TELEPHONE & ELECTRIC CORP, 70 Brittonia St., Meriden, Conn. 5. ADV. PG. 590.
 Control Corp., 718 Central Ave., Minneapolis 14, Minn. 6.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Dresser Electric Co., 942 Larned St., Detroit 7, Mich. 6.
 Ectro, Inc., Delaware, Ohio. 5.
 Electric Storage Battery Co., 42 S. 15th St., Phila- delphia 2, Pa. 5-6.
 ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. 4. ADV. PG. 592.
 ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. 3-6. ADV. PG. 349.
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. 6. ADV. PG. 486.
 FANSTEEL METALLURGICAL CORP., 2200 Sheridan Road, North Chicago, Ill. 6. ADV. PG. 116.
 FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 6. ADV. PG. 148-153.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-3-4-5-6. ADV. PG. 1-18.
 General Transformer Co., 18240 Harwood Ave., Home- wood, Ill. 6.
 Georator Corp., Box 463, Manassas, Va. 2-4.
 Gould-National Batteries, Inc., 35 Neoga St., Depew, N. Y. 3-5-6.
 Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif. 2.
 HEATH CO., Benton Harbor, Mich. 3. ADV. PG. 486.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio. 2-4.
 Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J. 1-5-6.
 Homelite Corp., Port Chester, N. Y. 2.
 HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. 4-5. ADV. PG. 298.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. 6.
 Kato Engineering Co., 1415 First Ave., Mankato, Minn. 2-4.
 King Electric Equipment Co., 9123 Inman Ave., Cleve- land 5, Ohio. 3-5.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif. 1-5-6.
 McColepin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif. 1-3-5.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 3-6.
 MODEL RECTIFIER CORP., 557 Roggers Ave., Brooklyn 25, N. Y. 1. ADV. PG. 536.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio. 1-6.
 Onan & Sons Inc., D. W., University Ave. at 25th St., S. E., Minneapolis 14, Minn. 2.
 OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. 3-5-6. ADV. PG. 479.
 PERKIN ENGINEERING CORP., 345 Kansas St., El Segundo, Calif. 3-6. ADV. PG. 604.
 Pioneer Gen-E-Motor Corp., Dept. EBG, 5841 W. Dickens, Chicago 39, Ill. 2.
 Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich. 6.
 Radiart Corp., 3455 Vega Ave., Cleveland 13, Ohio. 5.
 RAPID ELECTRIC CO., 2881 Middletown Rd., New York N. Y. 6. ADV. PG. 628.
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. 1-6. ADV. PG. 420.
 Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif. 1-3.
 Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio. 1-3-5-6.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. 5.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. 1-3-5-6.
 Ther Electric & Machine Works, 17 S. Jefferson St., Chicago, Ill. 1-3-5-6.
 Universal Motor Co., 456 Universal Drive, Oshkosh, Wis. 2-5.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill. 3.
 Willard Storage Battery Co., 200 Carnegie Hall, Cleve- land 15, Ohio. 1-3-5-6.
 Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa. 2-4-5.

ES—BEACONS—Radar

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Avlation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.

Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
 MAXSON CORP., W. L., 460 W. 34th St., New York 34, N. Y. ADV. PG. 144.
 Melpar, Inc., 453 Swann Ave., Alexandria, Va.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.

BEARINGS

1. Jewel
2. Miniature Ball
3. Miniature Needle

BIRD CO., RICHARD H., 1 Spruce St., Waltham, Mass. 1. ADV. PG. 520.
 Duotone Co., Inc., Keyport, N. J. 1.
 Gatti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J. 1.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1. ADV. PG. 1-18.
 LANDIS & GYR, INC., 45 W. 45th St., New York 36, N. Y. 2. ADV. PG. 510.
 MINIATURE PRECISION BEARINGS, INC., Keene, N. H. 2. ADV. PG. 321.
 NEW HAMPSHIRE BALL BEARINGS, INC., Peterborough, New Hampshire. 2. ADV. PG. 451.
 Swiss Jewel Co., Lafayette Bldg., Philadelphia 6, Pa. 1.
 Vallorbs Jewel Co., Lancaster, Pa. 1.

BELLOWS

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J. ADV. PG. 319.
 Bristol Co., The, Waterbury 20, Conn.
 Clifford Mfg. Co., Grove St., Waltham, Mass.
 Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
 Fulton Siphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

BELTS—Dial Drive

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brook- lyn, N. Y. ADV. PG. 258, 623.

BENCH TEST SET-UPS

Ainslie Electronic Products Inc., 312 Quincy Ave., Quincy 69, Mass.
 Alden Systems, Inc., Alden Research Center, Westboro, Mass.
 Avor Corp., 450 Broome St., New York 13, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, Conn.

BENDS—Microwave

See MICROWAVE ACCESSORIES

BLOCKS—Fuse Blocks & Holders

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 BEL FUSE INC., 311 Mountain Road, Union City, N. J. ADV. PG. 602.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 BUSSMANN MFG. CO., St. Louis 7, Mo. ADV. PG. 28.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brook- lyn, N. Y. ADV. PG. 258, 623.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
 LITTELFUSE, INC., Des Plaines, Ill. ADV. PG. 482.
 Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
 Neo-Sil Corp., 26 Cornhill Ave., Jersey City 4, N. J.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

BLOWERS—Small

Air Control Installations, Ltd., Rulslip, Middlesex, Eng- land.
 AIR-MARINE MOTORS, INC., 3939 Merrick Rd., Seaford, N. Y. ADV. PG. 589.
 American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif.
 Barber-Colman Co., Rockford, Ill.

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Dynamic Air Engineering Inc., 7412 Maie Ave., Los Angeles 1, Calif.
 Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 592.
 Fasco Industries, Inc., Rochester 2, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Globe Industries, Inc., 125 Sunrise Place, Dayton 7, Ohio.
HEINZE ELECTRIC CO., 685 Lawrence St., Lowell, Mass. ADV. PG. 326.
HOWARD INDUSTRIES, INC., Division: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 298.
 Ig Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.
 Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y.
 Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
 McLean Engineering Laboratories, Princeton, N. J.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Ontario, Wis.
MISSION-WESTERN ENGINEERS, INC., 132-134 W. Colorado St., Pasadena 1, Calif. ADV. PG. 574.
OSTER MFG. CO., JOHN, 1 Main St., Racine, Wis. ADV. PG. 494.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
 Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio.
ROTRON MFG. CO., INC., 7-9 Schoonmaker Lane, Woodstock, N. Y. ADV. PG. 136.
SANDERS ASSOCIATES, Nashua, N. H. ADV. PG. 504.
SERVO MECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 426.
 Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
 Stanat Tool & Machine Co., 47-28 37th St., Long Island City 1, N. Y.
 Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.
 Universal Electric Co., 300 E. Main St., Owosso, Mich.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

BOARDS—Capacitor or Resistor

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 American Radio Hardware Co., Inc., 152 MacQuestion Pkwy., Mt. Vernon, N. Y.
 Avor Corp., 450 Broome St., New York 13, N. Y.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 532.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
 Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Northeastern Engineering Inc., Manchester, N. H.
 Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

BOARDS—Strip Type

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.

American Radio Hardware Co., Inc., 152 MacQuestion Pkwy., Mt. Vernon, N. Y.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 532.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

BOBBINS—Coil Winding

Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, Ill. ADV. PG. 538.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 558.
BUCKEYE BOBBIN CO., 13337 Madison Ave., Cleveland, Ohio. ADV. PG. 603.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Y. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
 Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 Isolantite Mfg. Corp., Strirling, N. J.
KIRCHBERGER & CO., INC., M., 1425 Thirty-Seventh St., Brooklyn 18, N. Y. ADV. PG. 466.
 Kuhn & Jacob Molding & Tool Co., 1200 Southland St., Trenton, N. J.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Molded Products Co., Inc., 2820 N. Sylvania St., Fort Worth, Texas.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
 Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

BOBBINS—Transformer Winding

Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, Ill. ADV. PG. 538.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 558.
BUCKEYE BOBBIN CO., 13337 Madison Ave., Cleveland, Ohio. ADV. PG. 603.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
 Molded Products Co., Inc., 2820 N. Sylvania St., Fort Worth, Texas.

PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
 Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

BOLOMETER MOUNTS

See **MICROWAVE ACCESSORIES**
Crystal Mounts & Mixers

BOLOMETERS

See **Tubes, Bolometer**

BOLTS—Expansion or Toggle

E-Expansion . . . T-Toggle

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago 6, Ill. E-T.
 Arro Expansion Bolt Co., Boone Ave., Marion, Ohio. E-T.
 Atlas Screw & Specialty Co., 450 Broome St., New York 13, N. Y. E-T.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. E-T. ADV. PG. 581.
 Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill. E.
 Holub Industries, Inc., 414 DeKalb Ave., Sycamore, Ill. E-T.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. T. ADV. PG. 258, 623.
 National Lead Co., 111 Broadway, New York 6, N. Y. E. Screw Corp. of America, 103 Park Ave., New York 17, N. Y. E-T.
 Star Expansion Bolt Co., 147-149 Cedar St., New York 6, N. Y. E-T.
 Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill. E-T.

BOOKS

See **Technical Books—Publishers**

BOOMS—Microphone

Olesen Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 SOS Cinema Supply Co., 602 W. 52nd St., New York 19, N. Y.

BOOSTERS—Television

Alliance Manufacturing Co., Lake Park Blvd., Alliance, Ohio.
 Astatic Corporation, The, Conneaut, Ohio.
 Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Channel Master Co., Ellenville, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.
 I.D.E.A., 7900 Pendleton Pike, Indianapolis 26, Ind.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 LaPointe Electronics Inc., Rockville, Conn.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Radiart Corp., 3455 Vega Ave., Cleveland 13, Ohio.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
SPENCER-KENNEDY LABS, INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 326.
 Transvision Inc., 460 North Ave., New Rochelle, N. Y.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 312.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 Yonkers Industries, 28 School St., Yonkers, N. Y.

BOXES—Metal, Plastic or Waterproof

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
 Ainslie Electronic Products, Inc., 312 Quincy Ave., Quincy 69, Mass.
ART-LLOYD METAL PRODUCTS CORP., 2973 Crowsley Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Auburn Button Works, Inc., Auburn, N. Y.
B & M METAL PRODUCTS CORP., 14 Factory St., Cedar Grove, N. J. ADV. PG. 506.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Bennett Mfg. Co., Alden, N. Y.

Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Aviation Corp., 811 Whittier St., Bronx 59,
CORP., 844 Franklin St., Melrose 76, Mass.
 446.
 Metal Box Co., 260 E. 143rd St., New York,

Co., 3949 W. Schubert St., Chicago, Ill.
 Products Co., 1025 Line St., Camden, N. J.
 Metallic Door Co., Jamestown, N. Y.
 Co., 5631 Cahuenga Blvd., North Hollywood,

Co., Inc., Chas. Wm., Metal Specialties
 Smyone, Ohio.
PRODUCTS, INC., 315 Lexington Ave.,
 16, N. Y. ADV. PG. 614.
CO., 110 K St., South Boston, Mass. ADV.

FG. CO., Div. of Helder Bushing & Terminal
 225 Belleville Ave., Bloomfield, N. J.
 294.
CORP. OF AMERICA, 36-02 35th Ave.,
 nd City, N. Y. ADV. PG. 535.
 m Mfg. Co., 2893 Spring Grove Ave., Cin-
 5, Ohio.

Inc., 86-08 130th St., Richmond Hill 18,
 Products, Inc., 430 E. 102nd St., New
 Y.
 ation Co., 335 E. Price St., Philadelphia 44,

Co., Owatonna 55, Minn.
 Engineering Inc., Manchester, N. H.
PRODUCTS CORP., 32-62 49th St., Long
 3, N. Y. ADV. PG. 160.
PRODUCTS, INC., 479 Walton Ave.,
 51, N. Y. ADV. PG. 496.

Engineering Laboratories Co., Inc., 314 Adams
 ark 5, N. J.
 Corp., Jericho Turnpike, Mineola, N. Y.
 Co., Inc., Auburn, N. Y.
 fibre Co., Inc., 310 Wheeler St., Tonawanda,

etal Specialty Co., 429 W. Broadway, New
 N. Y.
 en, Inc., 475 Shrewsbury St., Worcester 4,
 Machine & Tool Co., Inc., P. O. Box 351,
 nth St., Bedford, Ind.
 Metal Products Corp., 343 W. 26th St.,
 N. Y.

KET CO., P. O. Box 93, Camden, N. J.
 530, 521.
INC., S., 1400 Atlantic Ave., Brooklyn 16,
 DV. PG. 262.
 Associates, Inc., 138 West St., South
 k, N. J.
CO., 1121 Chestnut St., Burbank, Calif.
 607.

f-m & Television Antenna
PRECISION MFG. CORP., 540 Casanova St.,
 N. Y. ADV. PG. 384.
 Radio Hardware Co., Inc., 152 MacQueston
 t. Vernon, N. Y.

RADIO CO., INC., 145 Hudson St., New
 N. Y. ADV. PG. 581.
 Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 ster Co., Ellenville, N. Y.

PRODUCTS CO., 233 E. 146th St., New
 N. Y. ADV. PG. 618.
 Corp., 126 Eleventh Ave., New York 11,

CORP. OF AMERICA, 36-02 35th Ave., Long
 y, N. Y. ADV. PG. 535.
CO., INC., 6101-23 Sixteenth Ave., Brook-
 ADV. PG. 258, 623.
 Electronics Inc., Rockville, Conn.
 Co., Inc., 60-66 Sackett St., Brooklyn 31,

Electronics Inc., 50 Island St., Lawrence, Mass.
 Handise Sales, Inc., 2016 Bronxdale Ave.,
 60, N. Y.
 Metal Products Co., Inc., 377-379 Turn-
 th River, N. J.
 Inc., Third St., North Wales, Pa.

APPLIANCE CORP., Sherburne, N. Y. ADV.
 Asbury Park, N. J.
 Metal Products Corp., 343 W. 26th St.,
 N. Y.
 Co., E. Market St. & Penna R. R., West
 Pa.

Circuit
 ner, Inc., 411 N. 12th St., Milwaukee 1,
 tries, Inc., Rochester 2, N. Y.
ELECTRIC CO., Apparatus Sales Div., 1 River
 Schenectady 5, N. Y. ADV. PG. 1-18.
Electric Co., 97 Plum St., Trenton 2, N. J.
RADIO MFG. CO., 970 McLaughlin Ave.,
 Box 1278, San Jose 8, Calif. ADV. PG.

tric Mfg. Co., 123 New Jersey Railroad Ave.,
 N. J.
INC., Des Plaines, Ill. ADV. PG. 482.
Corp., 1250 Atlantic Ave., Brooklyn 16,
 Manufacturing Company, 4739 Montrose Ave.,
 41, Ill.

Spencer Thermostat Div., Metals & Control Corp., 34
 Forest St., Attleboro, Mass.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868,
 Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

BRIDGES—Capacitance

AEROVOX CORP., 740 Belleville Ave., New Bedford,
 Mass. ADV. PG. 202, 203.
AVIATION ENGINEERING CORP., 34-56 58th St.,
 Woodside 77, N. Y. ADV. PG. 299.

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 Cinema-Television Ltd., Worsley Bridge Rd., London,
 S. E. 26, England.

Clough Bregle Co., 6014 N. Broadway, Chicago, Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A,
 Los Angeles 15, Calif.
 Corneli-Dubilier Electric Corp., South Plainfield, N. J.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St.,
 Brooklyn 11, N. Y. ADV. PG. 349.
 Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 219.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
 Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.

GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Gulton Mfg. Corp., Metuchen, N. J.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar
 Grove, N. J.

KALBFELL LABS., INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30,
 Pa.

Mallory & Co., Inc., P. R., 3029 E. Washington St.,
 Indianapolis 6, Ind.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG.
 130.

Metropolitan Electronics & Instruments Co., 106 Fifth
 Ave., New York 11, N. Y.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
 Pa. ADV. PG. 285.

Southwestern Industrial Electronics Co., 2831 Post
 Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Sprague Electric Co., 125 Marshall St., North Adams,
 Mass.

Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS INC., 1740 Broadway,
 New York 19, N. Y. ADV. PG. 654-660.

TECHNOLOGY INSTRUMENT CORP., 533 Main St.,
 Acton, Mass. ADV. PG. 97, 447.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila-
 delphia 44, Pa.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-
 cago 10, Ill.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—ELECTRICAL

BRIDGES—IMPEDANCE

BRIDGES—INDUCTANCE

See Instruments—Electrical Measuring

BRIDGES—Megohm

Associated Research, Inc., 3788 W. Belmont Ave., Chi-
 cago 18, Ill.
 Barnes Development Co., Lansdowne, Pa.
 Bendix Aviation Corp., 203 W. Third St., Cincinnati 2,
 Ohio.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A,
 Los Angeles 15, Calif.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 219.

GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar
 Grove, N. J.

KALBFELL LABS., INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.
 MacLeod & Hanopol, Inc., 10 Roland St., Charlestown
 29, Mass.

Mallory & Co., Inc., P. R., 3029 E. Washington St.,
 Indianapolis 6, Ind.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
 Pa. ADV. PG. 35.

Southwestern Industrial Electronics Co., 2831 Post
 Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Special Instruments Laboratory, Inc., 1003 Highland
 Ave., Knoxville, Tenn.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—Temperature

AVIATION ENGINEERING CORP., 34-56 58th St., Wood-
 side 77, N. Y. ADV. PG. 299.
 Barnes Development Co., Lansdowne, Pa.
 Bristol Co., The, Waterbury 20, Conn.

Eppley Lab., Inc., The, Newport, R. I.
 Foxboro Co., The, Foxboro, Mass.
KALBFELL LABS., INC., 1090 Morena Blvd., San
 Diego 10, Calif. ADV. PG. 365.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia
 30, Pa.
 Tech Laboratories, Inc., Bergen & Edsall Bldvs., Pali-
 sades Park, N. J.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave.,
 Philadelphia 44, Pa.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—Thermistor

Associated Research, Inc., 3788 W. Belmont Ave., Chi-
 cago 18, Ill.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago
 51, Ill.

Hycor Mfg. Co., 2961 E. Colorado St., Pasadena 8,
 Calif.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego
 10, Calif. ADV. PG. 365.

POLYTECHNIC RESEARCH & DEVELOPMENT CO.,
 INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG.
 122, 123.
 Rollin Co., 2010 N. Lincoln Ave., Pasadena 3, Calif.

SPERRY GYROSCOPE DIV. OF THE SPERRY CORP.,
 Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.

Tech Laboratories, Inc., Bergen & Edsall Bldvs., Pali-
 sades Park, N. J.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila-
 delphia 44, Pa.

Yellow Springs Instrument Co., Inc., P. O. Box 106,
 Yellow Springs, Ohio.

BRIDGES—VHF

See Instruments—Electrical Measuring

BRIDGES—Wheatstone

Associated Research, Inc., 3788 W. Belmont Ave., Chi-
 cago 18, Ill.
 Barnes Development Co., Lansdowne, Pa.
 Bristol Co., The, Waterbury 20, Conn.

Central Scientific Co., 1700 Irving Park Rd., Chicago 13,
 Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A,
 Los Angeles 15, Calif.

Computing Devices of Canada, Ltd., 338 Queen St.,
 Ottawa 4, Ontario.
EASTERN PRECISION RESISTOR CORP., 130-11 90
 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.

Eppley Lab., Inc., The, Newport, R. I.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.

HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit
 10, Mich.

Industrial Instruments, Inc., 89 Commerce Rd., Cedar
 Grove, N. J.
 Instrument Laboratories, 315 W. Walton Place, Chicago
 10, Ill.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia
 30, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New
 York 4, N. Y. ADV. PG. 385.

Metropolitan Electronics & Instrument Co., 106 Fifth
 Ave., New York 11, N. Y.
 Muirhead & Co., Ltd., Beckenham, Kent, England.

SHALLCROSS MFG CO., 10 Jackson Ave., Collingdale, Pa.
 ADV. PG. 35.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24,
 N. Y.

STICHT CO., INC., HERMAN H., 27 Park Place, New
 York 7, N. Y. ADV. PG. 627.
 Tech Laboratories, Inc., Bergen & Edsall Bldvs., Pali-
 sades Park, N. J.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila-
 delphia 44, Pa.
TRANS-SONICS, INC., Bedford Airport, Bedford, Mass.
 ADV. PG. 604.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-
 cago 10, Ill.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BROADCAST INPUT CONTROL EQUIPMENT

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
 Hills, Calif.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14,
 N. Y.

CINEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
 Burbank, Calif. ADV. PG. 289.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG.
 82, 83.

DAVEN CO., 191 Central Ave., Newark 4, N. J.
 ADV. PG. 79.
 Gates Radio Co., Quincy, Ill.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
 New York 4, N. Y.

RADIO CORP. OF AMERICA, Engineering Products Dept.,
 Camden, N. J. ADV. PG. 295, Inside Back & Back
 Covers.
SHALLCROSS MFG CO., 10 Jackson Ave., Collingdale,
 Pa. ADV. PG. 35.

Standard Electronics Corp., 289 Emmet St., Newark 5,
 N. J.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.

BRUSHES—Carbon & Graphite

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S.,
 Long Island City, N. Y.

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia 25, Pa.
 Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.
 Keystone Carbon Co., Inc., Saint Marys, Pa.
 St. Marys Carbon Co., State Rd., St. Marys, Pa.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 Speer Carbon Co., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
 Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.
 U. S. Graphite Co. Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.

BRUSHES—Metal-Graphite

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia 25, Pa.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 240, 241.
INSTRUMENT COMPONENTS, INC., 1834 Franklin St., Santa Monica, Calif. ADV. PG. 277.
 Keystone Carbon Co., Inc., Saint Marys, Pa.
NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 331.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
 St. Marys Carbon Co., State Rd., St. Marys, Pa.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 Speer Carbon Co., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
 Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.
 U. S. Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

BUS BAR SYSTEMS

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Trumbull Electric Dept. of General Electric Co., Plainville, Conn.

BUSHINGS—Hermetically Sealed

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
HELDOR MFG. CO., Div. of Helder Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind. ADV. PG. 390, 391.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 235.
 McCormick-Selph Associates, Palo Alto Airport, Palo Alto, Calif.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 545.
SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 626.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

BUSHINGS—Nonmetallic

American Radio Hardware Co., Inc., 152 MacQuestion Pkwy., Mt. Vernon, N. Y.
ATLANTIC INDIA RUBBER WORKS, INC., Dept. EL, 571 W. Polk St., Chicago 7, Ill. ADV. PG. 580.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 403, 409.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia 25, Pa.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 240, 241.
HELDOR MFG. CO., Div. of Helder Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
HEYMAN MFG. CO., Kenilworth 2, N. J. ADV. PG. 554.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
 Mica Insulator Co., Schenectady 1, N. Y.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 331.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 532.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 St. Marys Carbon Co., State Rd., St. Marys, Pa.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 Synthane Corp., Oaks, Pa.
 Thomas & Betts Co., 36 Butler St., Elizabeth 1, N. J.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 U. S. Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

CABINETS

See Also Housings

CABINETS—Metal

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
 Ainslie Electronic Products, Inc., 312 Quincy Ave., Quincy 69, Mass.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
ART-LLOYD METAL PRODUCTS CORP., 2973 Croysey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
B & M METAL PRODUCTS CORP., 14 Factory St., Cedar Grove, N. J. ADV. PG. 506.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Bennett Mfg. Co., Alden, N. Y.
 Bonney Forge & Tool Works, Allentown, Pa.
BOYLE METALCRAFT CORP., 150 Sullivan St., Brooklyn 31, N. Y. ADV. PG. 226.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
 Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Burken Lamination Corp., 811 Whittier St., Bronx 59, N. Y.
 Central Stamping & Mfg. Co., Polo, Ill.
CHURCHILL CORP., 844 Franklin St., Melrose 76, Mass. ADV. PG. 446.
 Cole Steel Equipment Co., 285 Madison Ave., New York 17, N. Y.
 Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.
 Corry-Jamestown Mfg. Co., Corry, Pa.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Detector Co., 5631 Cahuenga Blvd., North Hollywood, Calif.
DOLIN METAL PRODUCTS, INC., 315 Lexington Ave., Brooklyn 16, N. Y. ADV. PG. 614.
 Donnelly Electric & Mfg. Co., 3050 Washington St., Boston, Mass.
 Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.
 Eagle Signal Corp., Moline, Ill.
 Edo Corp., College Point, N. Y.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 Falstrom Co., 44 Falstrom Court, Passaic, N. J.
FORMICA CO., 110 K St., South Boston, Mass. ADV. PG. 598.
 Gates Radio Co., Quincy, Ill.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HELDOR MFG. CO., Div. of Helder Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
KARP METAL PRODUCTS CO., Div. of H & B Machine Co., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 341.
 Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
 Lindsay Structure, Inc., 5000 W. Dempster St., Skokie, Ill.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Metalcraft, Inc., 86-08 130th St., Richmond Hill 18, N. Y.

Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
 Muckle Mfg. Co., Owatonna 55, Minn.
MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 416.
 Northeastern Engineering Inc., Manchester, N. H.
PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 160.
 Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.
PREMIER-METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 592.
 Ref Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
 Riestler & Thesmacher Co., Cleveland 13, Ohio.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Stevens-Walden, Inc., 475 Shrewsbury St., Worcester 4, Mass.
 Stolper Steel Products Co., 308 Pilgrim Rd., Menomonee Falls, Wis.
 Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 262.
 Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.
 Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.
 Wurplitz Co., Rudolph, North Tonawanda, N. Y.
ZERO MFG. CO., 1121 Chestnut St., Burbank, Calif. ADV. PG. 607.

CABINETS—Plastic

Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Kuhn & Jacob Molding & Tool Co., 1200 Southard St., Trenton, N. J.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Product Engineering Laboratories Co., Inc., 314 Adams St., Newark 5, N. J.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.

CABINETS—Temperature & Humidity

BOWSER TECHNICAL REFRIGERATION Div. of Bowser Inc., Terryville, Conn. ADV. PG. 366, 367.
CONRAD INDUSTRIAL COOLERS, 53 W. 4th St., Holland, Mich. ADV. PG. 548.
INTERNATIONAL RADIANT CORP., 40 Matinecock Ave., Port Washington, N. Y. ADV. PG. 626.
MURPHY & MILLER, INC., 1322 S. Michigan Ave., Chicago 5, Ill. ADV. PG. 610.
STANDARD CABINET CO., 57 Washington Ave., Carlstadt, N. J. ADV. PG. 619.

CABINETS—Wood

Admiral Corp., 3800 Cortland St., Chicago, Ill.
 Alamo Electronic Corp., 105 Romano St., San Antonio 1, Tex.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Cambridge Pattern Works, Inc., 55 First St., Cambridge 41, Mass.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Electro-Voice, Inc., Buchanan, Mich.
 Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Illinois Wood Products Corp., 1656 N. Besly Court, Chicago 22, Ill.
 Ingraham Co., E., Bristol, Conn.
 Koolman Show Case Corp., Fort Wayne 1, Ind.
 Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.
 Louis Bros., 3543 E. 16th St., Los Angeles 23, Calif.
 McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Mattison Television & Radio Corp., 10 W. 181st St., New York 53, N. Y.
 National Electronics Mfg. Co., 314 W. 58th St., Los Angeles, Calif.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 Scientific Wood Cabinet Co., 88 Holmes St., Belleville, N. J.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Steger Furniture Mfg. Co., Steger, Ill.

Mfg. Corp., 8538 Warner Drive, Culver City,
 Carlsson Co., Rochester 3, N. Y.
A ELECTRIC PRODUCTS, INC., 1740 Broad-
 New York 19, N. Y. ADV. PG. 654-660.
 Wood Specialty Mfg. Co., 951 Broadway, Fall
 Mass.
ITY LOUDSPEAKERS, INC., 80 S. Kensico
 White Plains, N. Y. ADV. PG. 464.
 en Electronic Lab., Inc., 7556 Melrose Ave.,
 Angeles 46, Calif.
 ck Mfg. Corp., White Rock, S. C.
 t Corp., 501 Salzburg Ave., Bay City, Mich.
 Co., Rudolph, North Tonawanda, N. Y.

Iso Wire

ASSEMBLIES

E ELECTRONICS CORP., 507 26th St., Union
 J. ADV. PG. 585.
 al Electronics, Inc., Raleigh-Durham Airport,
 Box 6043, Raleigh, N. C.
RODUCTS CO., 112 N. Main St., Brockton 64,
 ADV. PG. 204, 205.
 Electronic Corp., 2040 Colorado Ave.,
 Monica, Calif.
 Machine & Foundry Co., Electronics Div., 1085
 wealth Ave., Boston 15, Mass.
N PHENOLIC CORP., 1830 S. 54th Ave.,
 50, III. ADV. PG. 111.
 Radio-Hardware Co., Inc., 152 MacQueston
 Mt. Vernon, N. Y.
 ics Co., 1946 Farmingdale Rd., Westfield,
 450 Broome St., New York 13, N. Y.
& WILLIAMSON, 235 Fairfield Ave., Upper
 Pa. ADV. PG. 239.
 g. Co., 4647 W. Van Buren St., Chicago 44,

g. Co., Alden, N. Y.
 re Rope Co., 1-2-3 Gregg St., Lodi, N. J.
CO., INC., WILLIAM, North & Valley Sts.,
 istic, Conn. ADV. PG. 308, 309.
CO., H. H., 726 Stanton St., Toledo, Ohio,
 G. 422.
HS CORP., Electronic Instruments Div., 511
 d St., Philadelphia 23, Pa. ADV. PG. 211-214.
 uestries Corp., Box 117, 19 Delaware Ave.,
 N. Y.
BLE DIV. OF CRESCENT CO., INC., Front &
 Ave., Pawtucket, R. I. ADV. PG. 323.
 onics Corp., 141 E. 25th St., New York 10,

PRODUCTS CO., 233 E. 146th St., New
 N. Y. ADV. PG. 618.
CONNECTOR CO., 35 N. Second Ave., Mt.
 N. Y. ADV. PG. 260.
TECHNICAL CORP., 5 E. 57th St., New
 N. Y. ADV. PG. 452.
 Wire & Supply Co., 2850 Irving Park Rd.,
 18, III.
WIRE CO., 50 Church St., New York 7, N. Y.
 480.
 ics Corp., Morris Plains, N. J.
DUCTS, INC., Box 1, Columbus, Nebr. ADV.
 343.
AB, INC., 6544 N. Sheridan Rd., Chicago 26,
 V. PG. 609.
 g. Corp., 7 North Ave., Wakefield, Mass.
 Materials Co., 5315-17 N. Ravenswood Ave.,
 40, III.
PRODUCTS, INC., 7643 Fay St., La Jolla,
 ADV. PG. 589.
 ation, 190 W. Glenwood Ave., Philadelphia

onics Co., Inc., 166 River St., Paterson 1,
 Corp., 1601 Wall St., Fort Wayne 6, Ind.
TELEPHONE & RADIO CORP., 88 Kingsland
 ton, N. J. ADV. PG. 148-153.
 hea Mechanisms, Inc., 81-01 Broadway, Elm-
 Y.

ELECTRIC CO., WIRING DEVICE DEPT.,
 te 7, R. I. ADV. PG. 496.
HERMETIC SEALING CORP., 99 E. Haw-
 ve., Valley Stream, N. Y. ADV. PG. 608.
 ulated Wire Works, Inc., 69 Gordon Ave.,
 5, R. I.
 inated Products, Inc., 2857 S. Halstead St.,
 8, III.
R-F FITTINGS CO., 702 Beacon St., Boston
 ADV. PG. 446.
RADIO CO., 275 Massachusetts Ave., Cam-
 7, Mass. ADV. PG. 90, 91.
 s Corp., 2 Main St., Belleville 9, N. J.
WFG. CO., P. O. Box 612, Round Lake, III.
 243.

e & Cable Co., Holyoke, Mass.
CO., T. J., 2508-14 W. Lawrence Ave.,
 5, III. ADV. PG. 443.
 3 Products Co., Danbury, Conn.
CORP. OF AMERICA, 36-02 35th Ave., Long
 y, N. Y. ADV. PG. 535.
 ics Corp., 423 Broome St., New York
 ument & Electronics Mfg. Corp., GPO Box
 klyn 1, N. Y.
 Hanopold, Inc., 10 Roland St., Charlestown

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338,
 Inglewood, Calif.
 Microdot Division, Felts Corp., 1826 Fremont Ave.,
 South Pasadena, Calif.
 Modelcric Products Corp., 1500 Bangs Ave., Asbury
 Park, N. J.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
 Northeastern Engineering Inc., Manchester, N. H.
ORTHO CORP., 196 Albion Ave., Paterson 2, N. J.
 ADV. PG. 569.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta.,
 Los Angeles 8, Calif.
PESCHEL ELECTRONICS, INC., 13 Garden St., New
 Rochelle, N. Y. ADV. PG. 614.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8,
 Mass. ADV. PG. 310.
 Phoenix Electronics, Inc., 50 Island St., Lawrence,
 Mass.
 Railway Communications, Inc., Smith Rd. & Glenwood,
 Raytown, Mo.
 Rhode Island Insulated Wire Co., 624 S. Michigan,
 Chicago 5, III.
 Riverside Mfg. & Electrical Supply Co., 10221 Michi-
 gan Ave., Dearborn, Mich.
 Roñan Co., Corner Route 1 & Camp Meeting Rd., Tops-
 field, Mass.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave.,
 Chicago 41, III.
 Scientific Assembly Co., 65 Hope St., Brooklyn 11, N. Y.
 Selectar Industries, Inc., 401 E. 138th St., New York
 54, N. Y.
 Sittler Corp., 18 N. Ada St., Chicago 7, III.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chi-
 cago 39, III.
 Super-Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago
 22, III. ADV. PG. 306.
 Taffet Radio & Television Co., 2530 Belmont Ave., New
 York 58, N. Y.
 Telectro Industries Corp., 35-18 37th St., Long Island
 City 1, N. Y.
 Telegraph Construction & Maintenance Co., Ltd., Telcon
 Works, Greenwich, London, S. E. 10, England.
 Thomas Electronics, Inc., 118 Ninth St., Passaic, N. J.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV.
 PG. 520.
 Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22,
 III.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
 U. H. F. Resonator Corp., 224 Seventh St., Racine,
 Wis.
 U. S. COMPONENTS, INC., 454 E. 148th St., New
 York 55, N. Y. ADV. PG. 313.
 U. S. Wire & Cable Corp., Progress & Monroe Sts.,
 Union, N. J.
 United Technical Laboratories, Box 425-V, Morristown,
 N. J.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
WALTHAM HOROLOGICAL CORP., 711 Broad St., Lynn,
 Mass. ADV. PG. 553.
 Western Sound & Electric Labs., Inc., 805 S. Fifth
 St., Milwaukee 4, Wis.
 Whitaker Cable Corp., Kansas City 16, Mo.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

CABLE CLAMPS & CLIPS

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore
 St., Chicago 22, III. ADV. PG. 538.
COMMERCIAL PLASTICS CO., 2822 W. North Ave.,
 Chicago 47, III. ADV. PG. 572.
WECKESSER CO., 5261 Avondale Ave., Chicago 30, III.
 ADV. PG. 568.

CABLE HOOKS

COMMERCIAL PLASTICS CO., 2822 W. North Ave.,
 Chicago 47, III. ADV. PG. 572.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12,
 III.
 Laughlin Co., Thomas, 199 Fore, Portland, Me.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J.
 ADV. PG. 224.
WECKESSER CO., 52161 Avondale Ave., Chicago 30, III.
 ADV. PG. 568.

CABLE—Coaxial Flexible

ADVANCE INSULATED WIRE & CABLE CO., INC.,
 10 Tingley Lane, Raritown Township, Plainfield, N. J.
 ADV. PG. 528.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi-
 cago 50, III. ADV. PG. 111.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4,
 N. Y.
ANDREW CORP., 363 E. 75th St., Chicago 19, III.
 ADV. PG. 556.
 Ansonia Wire & Cable Co., The, 63 Main St., Ansonia,
 Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01
 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York
 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,
 III.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St.,
 Boston 25, Mass. ADV. PG. 487.
BRAND & CO., INC., WILLIAM, North & Valley Sts.,
 Willimantic, Conn. ADV. PG. 308, 309.

British Electronic Sales Co., 23-03 45th Rd., Long
 Island City 1, N. Y.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front &
 Central Ave., Pawtucket, R. I. ADV. PG. 323.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV.
 PG. 275.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York
 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd.,
 Chicago 18, III.
 Communication Products Co., Inc., Marlboro, N. J.
 Consolidated Wire & Associated Companies, 1635 S.
 Clinton St., Chicago 16, III.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner
 Blvd., Dallas 10, Texas.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave.,
 Chicago 40, III.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland
 Rd., Clifton, N. J. ADV. PG. 148-153.
 General Insulated Wire Works, Inc., 69 Gordon Ave.,
 Providence 5, R. I.
GENERAL PRECISION LABORATORY, INC., 63 Bed-
 ford Rd., Pleasantville, N. Y. ADV. PG. 256.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 90, 91.
 Holyoke Wire & Cable Co., Holyoke, Mass.
J F D MFG. CO. INC., 6101-23 Sixteenth Ave., Brooklyn,
 N. Y. ADV. PG. 258, 623.
 Kings Microwave Co., Inc., 719 Main St., New
 Rochelle, N. Y.
 Okonite Co., The, Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8,
 Mass. ADV. PG. 310.
 Phelps Dodge Copper Products Corp., 40 Wall Street, New
 York 5, N. Y.
PLASTOID CORP., 42-61 24th St., Long Island City 1,
 N. Y. ADV. PG. 229.
PRODELIN, INC., 307 Bergen Ave., Kearny, N. J.
 ADV. PG. 306.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken,
 N. J. ADV. PG. 356.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y.
 ADV. PG. 44.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
SURPRENANT MFG. CO., 199 Washington St., Boston 8,
 Mass. ADV. PG. 519.
 Telegraph Construction & Maintenance Co., Ltd., Telcon
 Works, Greenwich, London, S. E. 10, England.
 Transradio Ltd., 138-A Cromwell Rd., London SW 7,
 England.
 U. S. Wire & Cable Corp., Progress & Monroe St.,
 Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave.,
 Clifton, N. J.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV.
 PG. 456.

CABLE—Coaxial Rigid

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
ANDREW CORP., 363 E. 75th St., Chicago 19, III.
 ADV. PG. 556.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 North-
 ern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1,
 N. Y.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front &
 Central Ave., Pawtucket, R. I. ADV. PG. 323.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chi-
 cago 18, III.
 Communication Products Co., Inc., Marlboro, N. J.
 Consolidated Wire & Associated Companies, 1635 S.
 Clinton St., Chicago 16, III.
 Dielectric Products Co., Inc., 125 Virginia Ave., Jersey
 City 5, N. J.
JOHNSON, CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 Phelps Dodge Copper Products Corp., 40 Wall St., New
 York 5, N. Y.
PRODELIN, INC., 307 Bergen Ave., Kearney, N. J.
 ADV. PG. 306.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken,
 N. J. ADV. PG. 356.
 Selectar Industries, Inc., 401 E. 138th St., New York
 54, N. Y.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.
 Telegraph Construction & Maintenance Co., Ltd., Telcon
 Works, Greenwich, London, S.E., 10, England.
TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5,
 N. J. ADV. PG. 427.
 U. S. Wire & Cable Corp., Progress & Monroe St.,
 Union, N. J.

CABLE—Insulated

ADVANCE INSULATED WIRE & CABLE CO., INC., 10
 Tingley Lane, Raritown Township, Plainfield, N. J.
 ADV. PG. 528.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi-
 cago 50, III. ADV. PG. 111.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller
 Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4,
 N. Y.
 Ansonia Wire & Cable Co., The, 63 Main St., Ansonia,
 Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01
 Northern Blvd., Corona, N. Y.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Hazard Insulated Wire Works, Div., The Okonite Co., Wilkes-Barre, Pa.
 Holyoke Wire & Cable Co., Holyoke, Mass.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Koiled Kords, Inc., Box K, New Haven 14, Conn.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 Okonite Co., The Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicolli St., New Haven 4, Conn.
 Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Sequoia Process Corp., 881 Douglas Ave., Redwood City, Calif.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S.E. 10, England.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
 Transradio, Ltd., 138A Cromwell Rd., London, S.W. 7, England.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe St., Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Western Insulated Wire Co., 2425 E. 30th St., Los Angeles 58, Calif.
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.
 Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio.

CABLE—Microphone

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Communication Products Co., Inc., Marlboro, N. J.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Custom Electronics Corp., Morris Plains, N. J.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Jersey Specialty Co., Little Falls, N. J.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Okonite Co., The Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Phelps Dodge Copper Products Corp., 40 Wall Street, New York 5, N. Y.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Holyoke Wire & Cable Co., Holyoke, Mass.
J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Koiled Kords, Inc., Box K, New Haven 14, Conn.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Okonite Co., The Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PAGE 44.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S.E. 10, England.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe St., Union, N. J.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.
 Wuriltzer Co., Rudolph, North Tonawanda, N. Y.

CABLE—Shielded

ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Hazard Insulated Wire Works, Div., The Okonite Co., Wilkes-Barre, Pa.
 Holyoke Wire & Cable Co., Holyoke, Mass.
J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Koiled Kords, Inc., Box K, New Haven 14, Conn.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.
 Okonite Co., The Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S.E. 10, England.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
 Transradio, Ltd., 138A Cromwell Rd., London SW 7, England.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe St., Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

CABLE—Transmission Line

ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 American Electroengineering Corp., 2040 Colorado Ave., Santa Monica, Calif.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
 Argyle Electronics Co., 8 W. 18th St., New York 11, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Bergen Wire Rope Co., 1-2-3 Gregg St., Lodi, N. J.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Communication Products Co., Inc., Marlboro, N. J.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Custom Electronics Corp., Morris Plains, N. J.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Jersey Specialty Co., Little Falls, N. J.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Okonite Co., The Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Phelps Dodge Copper Products Corp., 40 Wall Street, New York 5, N. Y.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.

ABLE CORP., 330 Ridge St., Rome, N. Y. G. 44.
Telephones & Cables Ltd., Connaught House, London, W. C. 2, England.
Construction & Maintenance Co., Ltd., Telcon Greenwich, London, S. E. 10, England.
Ltd., 138A Cromwell Rd., London S. W. 7, N. Y.
per Co., 1230 Avenue of the Americas, New York, N. Y.
& Cable Corp., Progress & Monroe Sts., N. J.
Electric Wire & Cable Corp., 8 Ackerman Ave., N. J.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
Transitron, Inc., 154 Spring St., New York 12, N. Y.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

CANS

NOTE:
(h) indicates hermetically sealed types

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384. (h)
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
Aluminum Goods Mfg. Co., Manitowoc, Wis.
Atlas Screw & Specialty Co., 450 Broome St., New York 13, N. Y.
Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
Barnes Metal Products Co., 4425 W. 16th St., Chicago 23, Ill.
Bennett Mfg. Co., Alden, N. Y.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618. (h)
Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Craft Mfg. Co., 3949 W. Schubert St., Chicago, Ill. (h)
Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
ELECTRO-SEAL CORP., 946 North Ave., Des Plaines, Ill. ADV. PG. 40.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 608. (h)
HELDOR MFG. CO., DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294. (h)
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 235. (h)
HUDSON TOOL & DIE CO., INC., 118 S. 14th St., Newark, N. J. ADV. PG. 325.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 369.
OLYMPIC METAL PRODUCTS CO., INC., Phillipsburg, N. J. ADV. PG. 168. (h)
Paul & Beekman Inc., 1801 Courtland St., Philadelphia 40, Pa.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif. (h)
Scovill Manufacturing Co., Waterbury 20, Conn.
SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 626. (h)
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583. (h)
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y. (h)
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 262.
White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester 3, Mass.
Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J. (h)
ZERO MFG. CO., 1121 Chestnut St., Burbank, Calif. ADV. PG. 607.

CALIBRATORS—SWEEP

CALIBRATORS—UHF

See Instruments—Electrical Measuring

CALIBRATORS—Voltage

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
INSTRUMENT ELECTRONICS CORP., 90 Main St., Port Washington, N. Y. ADV. PG. 586.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
MERCURY ELECTRONICS CO., Box 450, Red Bank, N. J. ADV. PG. 127.
Radiation, Inc., Melbourne, Fla.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.

CAMERAS—Oscilloscope

Airmec Ltd., High Wycombe, Buckinghamshire, England.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BURKE & JAMES INC., 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 418.
DuMont Laboratories, Inc., Allen B., Instrument Div., 750 Bloomfield Ave., Clifton, N. J.
Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
ELECTRONIC TUBE CORP., 1800 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
FAIRCHILD CAMERA & INSTRUMENT CORP., Robbins Lane, Syosset, N. Y. ADV. PG. 351, 352.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Maurer, Inc., J. A., 37-01 31st St., Long Island City, N. Y.
Warrick Co., Frederick P., Rt. 1, W. Long Lake Rd., Bloomfield Hills, Mich.

CAMERAS—Radar Recording

Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Maurer, Inc., J. A., 37-01 31st St., Long Island City, N. Y.
Warrick, Frederick P., Rt. 1, W. Long Lake Rd., Bloomfield Hills, Mich.

CAMERAS—Television

Du Mont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 623.

CAMERAS—X-Ray

Central Research Laboratories, Inc., Red Wing, Minn.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

NOTE:

Throughout all capacitor listings
(h) indicates hermetically sealed types
(p) indicates pressure types
(v) indicates vacuum types

CAPACITORS

Capacitors, Fixed

1. Ceramic
2. Electrolytic
3. Energy Storage
4. Feed Through
5. Fixed Composition
6. Gas Filled
- 6a. Glass Dielectric
7. High Voltage
8. Metallized Paper
9. Mica
10. Paper
11. Plastic Dielectric
12. Power Factor
13. Precision Air
14. Pulse Forming Network
15. Silvered Mica
16. Tantalum
17. Vacuum

Capacitors, Variable

18. Trimmer-Air
19. Trimmer-Ceramic
- 19a. Trimmer-Glass
20. Trimmer-Mica
21. Trimmer-Vacuum
22. Tuning-Receiver
23. Tuning-Transmitter

AEROVOX CORP., 740 Belleville Ave., New Bedford, Mass. 2-3-4-5-7-8-9-10-11-12-14-15. ADV. PG. 202, 203. (h)
Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis. 1.
All Star Products, Inc., Defiance, Ohio. 18-19-22.
American Condenser Co., 4410 Ravenswood Ave., Chicago 40, Ill. 2-7-10.

uhf

INSULATED WIRE & CABLE CO., INC., 10 Lane, Raritan Township, Plainfield, N. J. 528.
PHENOLIC CORP., 1830 S. 54th Ave., 50, Ill. ADV. PG. 111.
Wire & Cable Co., 25 Broadway, New York 4, N. Y.
CORP., 363 E. 75th St., Chicago 19, Ill. 556.
Electronics Co., 8 W. 18th St., New York 11, N. Y.
Pacific Wire & Cable Co., Inc., 112-01 Blvd., Corona, N. Y.
Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Co., 4647 W. Van Buren St., Chicago 44, N. Y.
RADIO CO., INC., 145 Hudson St., New York 7, N. Y. ADV. PG. 581.
INSULATED WIRE & CABLE CO., 63 Bay St., 5, Mass. ADV. PG. 487.
CO., INC., WILLIAM, North & Valley Sts., Chic, Conn. ADV. PG. 308, 309.
CABLE CORP., Hill St., Chester, N. Y. 275.
TECHNICAL CORP., 5 E. 57th St., New York 10, N. Y. ADV. PG. 452.
Wire & Supply Co., 2850 Irving Park Rd., 8, Ill.
on Products Co., Inc., Marlboro, N. J.
Wire & Associated Companies, 1635 S. L., Chicago 16, Ill.
DUCTS, INC., Box 1, Columbus, Nebr. 342, 343.
TELEPHONE AND RADIO CORP., 88 Kingsland Ave., N. J. ADV. PG. 148-153.
Vision Co., Inc., 1041 Forbes St., Pitts- Pa.
ulated Wire Works, Inc., 69 Gordon Ave., 5, R. I.
salty Co., Little Falls, N. J.
Electric Products Co., 1356 Chamber of Bldg., Pittsburgh 30, Pa.
The Canal St., Passaic, N. J.
STICS CORP., 25 Foster St., Worcester 8, Vt. PG. 310.
le Copper Products Corp., 40 Wall St., New York, N. Y.
CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
INC., 307 Bergen Ave., Kearny, N. J. ADV. PG. 260.
RELATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
Construction & Maintenance Co., Ltd., Telcon Greenwich, London, S. E. 10, England.
Ltd., 138A Cromwell Rd., London S. W. 7, N. Y.
& Cable Corp., Progress & Monroe Sts., N. J.

CRISTALS—Crystal

cts, Inc., 7627 Lake St., River Forest, Ill. 7, Rex, 1314 N. E. 17th Court, P. O. Box rt Lauderdale, Fla.
SCIENTIFIC CO., Richmond, Calif. ADV. PG. 260.
CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
ADIO CO., Cedar Rapids, Iowa. ADV. PG. 516.
STRUMENT CO., Box 535, Caldwell, N. J. 516.
ment Co., 110 Cornelia St., Boonton, N. J.
RADIO CO., 275 Massachusetts Ave., Cambridge, Mass. ADV. PG. 90, 91.
ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
RIC CO., 25 Maple Ave., Pine Brook, N. J. 400, 401.
BORATORIES, Morganville, N. J. ADV. PG. 385.
INSTRUMENTS, LTD., 23 Beaver St., New York, N. Y. ADV. PG. 385.
Engineering, Ltd., Arnprior, Ontario.
ENTS CORP., Boonton, N. J. ADV. PG. 385.
seas Ltd., Century House, Shaftesbury Ave., W. C. 2, England.
ment Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.

American Radionic Co., 33 & 55 Flatbush Ave., Brooklyn, N. Y. 10. (h) (p) (v)
AMPEREX ELECTRONICS CORP., 230 Duffy Ave., Hicksville, N. Y. 17. ADV. PG. 429. (v)
ARCO ELECTRONICS, INC., 103 Lafayette St., New York, N. Y. 1-4-7-9-10-15-19-20. ADV. PG. 322.
 Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y. 1-4-5-9-19.
 Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va. 1.
ASTRON CORP., 255 Grant Ave., East Newark, N. J. 2-3-4-5-7-8-10-11-12. ADV. PG. 296. (h)
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. 10.
 Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J. 1.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. 13. ADV. PG. 299.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 23. ADV. PG. 239.
 Beck's Inc., 298-300 E. Fifth St., St. Paul 1, Minn. 11-13-22.
 Bendix Aviation Corp., 203 W. Third St., Cincinnati 2, Ohio. 11.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y. 22.
 British Industries Corp., 164 Duane St., New York 13, N. Y. 1-2-7-9-10-11-15.
 British Radio Electronics, Ltd., 1 Thomas Circle, Washington 5, D. C. 15.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. 18-23.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. 19. ADV. PG. 76.
CARDWELL MFG. CORP., ALLEN D., 97 Whiting St., Plainville, Conn. 18-19-20-21-22-23. ADV. PG. 410.
CAST OPTICS CORP., 1 Post Rd., Riverside, Conn. 11. ADV. PG. 597.
CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. 1-4-7-19-22-23. ADV. PG. 21-24.
CHICAGO CONDENSER CORP., 3255 W. Armitage Ave., Chicago 47, Ill. 3-4-10. ADV. PG. 432. (h)
CONDENSER PRODUCTS CO., 7517 N. Clark St., Chicago 26, Ill. 2-3-5-6a-11-12-14-19a. ADV. PG. 273 (h)(p)(v)
 Cornell-Dubilier Electric Corp., South Plainfield, N. J. 1-2-3-4-5-7-8-9-10-11-12-14-15-16. (h)
 Corning Glass Works, Corning, N. Y. 6a-19a.
 Corson Electric Mfg. Corp., 540 39th St., Union City, N. J. 7-10-11-14. (h)
COSMIC RADIO CORP., 853 Whittier St., New York 59, N. Y. 2-3. ADV. PG. 436.
 Dolinko & Wilkens, Inc., 1901-7 Summit Ave., Union City, N. J. 7-17. (v)
 Du-Co Ceramics Co., Box 587, Butler 8, Pa. 1-19.
 Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa. 2-8-10.
 Dumont Electric Co., 308 Dyckman St., New York, N. Y. 2-3-4-7-10-11-12.
EITEL-McCULLOUGH, INC., San Bruno, Calif. 17-21-23. ADV. PG. 378, 379. (v)
 Electro Motive Mfg. Co., South Park & John St., Williamantic, Conn. 1-4-7-9-10-15-18-19-20.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill. 15.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. 1-4-7-9-11-15-19. ADV. PG. 121. (h)
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. 16. ADV. PG. 116.
 Fast & Co., John E., 3101 N. Pulaski Rd., Chicago 41, Ill. 3-4-7-10-11-12. (h)
FILM CAPACITORS, INC., 337 E. 139th St., New York 54, N. Y. 6a-7-11-19a. ADV. PG. 518. (h)
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. 4-10-11. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 2-3-4-6a-7-10-11-12-14-16-19a. ADV. PG. 1-18. (h)
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. 17. ADV. PG. 1-18. (v)
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. 18-19-22-23. ADV. PG. 291. (v)
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 9-10-13. ADV. PG. 90, 91.
 Geotronic Labs., Inc., Dallas 11, Texas. 11.
GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif. 18. ADV. PG. 626.
GLENCO CORP., Metuchen, N. J. 1. ADV. PG. 598.
GOOD-ALL ELECTRIC MFG. CO., 112 W. First St., Oqallala, Neb. 4-10-11. ADV. PG. 588.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. 2-3-4-7-8-10-11-12-14. ADV. PG. 473. (h)
 Gulton Mfg. Corp., Metuchen, N. J. 1.
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago 11. 19-20. ADV. PG. 414.
HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. 18-22-23. ADV. PG. 164-167.
 Hansell, Inc., U., Westerly, R. I. 1.
 Herlec Corp., The, 422 N. Fifth St., Milwaukee 3, Wis. 1-19. (h)(p)(v)
HI-Q DIVISION, AEROVOX CORP., Seneca Ave., Olean, N. Y. 1-19. ADV. PG. 202, 203. (h)
HOPKINS ENGINEERING CO., 2082 Lincoln Ave., Altadena, Calif. 4-8-10-11-12. ADV. PG. 547. (h)
ILLINOIS CONDENSER CO., 1616 N. Throop St., Chicago 22, Ill. 2-10. ADV. PG. 255. (h)
 Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill. 2-7-10-11. (h)

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. 1-18-19-22. ADV. PG. 535.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. 5. ADV. PG. 175-178.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. 22. ADV. PG. 258, 623
 Jeffers Electronics Div of Speer Carbon Co., Du Bois, Pa. 1-5-7.
JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. 4-7-17-21-23. ADV. PG. 188-190. (v)
 Johanson Mfg. Co., Boonton, N. J. 22-23. (h)(p)(v)
JOHNSON CO., E. F., Waseca, Minn. 6-18-22-23. ADV. PG. 404-407. (p)
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. 10. ADV. PG. 568.
LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. 6-7-23. ADV. PG. 382, 383. (h)(p)(v)
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Va. 9-13-15.
 Lesa, Via Bergamo 21, Milan, Italy. 9-15.
 Luther Electronic Mfg. Co., 7567 W. Adams Blvd., Los Angeles, Calif. 7-10-11-14. (h)
MAGNAVOX CO., THE Components Div., Fort Wayne 4, Ind. 2. ADV. PG. 328.
 Maida Development Co., 12 E. Howard St., Phoebus, Va. 1-4-7-19.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 1-2-4-7-9-10-15-16-19. (h)
 Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. 2-3-4-7-9-10-11-14-15. (h)
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 18-23.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 22.
 Mucon Corp., 9 St. Francis St., Newark 5, N. J. 1.
 Muirhead & Co., Ltd., Beckenham, Kent, England. 9-10.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England. 18-22-23.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill. 1-19.
 Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif. 17.
NATIONAL CAPACITOR CO., 585 Washington St., Quincy 69, Mass. 3-4-5-7-8-10-11-12-14. ADV. PG. 515. (h)
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. 18-22-23. ADV. PG. 232, 233.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill. 2-23.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. 10-11-14. ADV. PG. 580, 581.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y. 10-22.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. 11. ADV. PG. 81.
PLANET MFG. CORP., 225 Belleville Ave., Bloomfield, N. J. 2. ADV. PG. 394.
 Plastic Capacitors, Inc., 2511 W. Moffat St., Chicago 47, Ill. 6a-11-19a. (h)
 Potter Co., 1850 Sheridan Rd., North Chicago, Ill. 4-7-10-11. (h)
 Pyramid Electric Co., 1445 Hudson Blvd., North Bergen, N. J. 2-3-4-7-8-10-11-12. (h)
 Quality Components, Inc., St. Marys, Pa. 5.
 Radio Condenser Co., Camden, N. J. 22.
 Radio Frequency Co., 44 Park St., Medfield, Mass. 7.
RADIO MATERIALS CORP., 1708 Belmont Ave., Chicago 13, Ill. 1-7. ADV. PG. 172, 173.
 Sangamo Electric Co., Capacitor Div., Marion, Ill. 2-3-7-9-10-15-16. (h)
 Saxonburg Ceramics Co., Saxonburg, Pa. 1-19.
SICKLES, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass. 18. ADV. PG. 357.
 Skottie Electronics, Inc., 1106 Myers St., Peckville, Pa. 1-4.
 Solar Mfg. Corp., 2660 E. 46th St., Los Angeles, Calif. 1-4-7-15-19.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass. 1-2-3-4-6a-7-8-9-10-11-12-14-15-16-19-19a. (h)
STACKPOLE CARBON CO., St. Marys, Pa. 5. ADV. PG. 388, 389.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. 1-3-7-9-10-12-15.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind. 2-7-9-10-12.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. 1-19. ADV. PG. 247-250.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y. 1-2-10.
 Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London, W. 3, England. 1-2-3-4-5-7-9-10-11-12-14-15-16. (h)
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y. 18-19-20.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. 3-4-7-8-10-11-12-14. ADV. PG. 364. (h)
 United Condenser Corp., 337 E. 139th St., New York 54, N. Y. 7-10-11. (h)
UNITED ELECTRONICS CO., 42 Spring St., Newark 4, N. J. 17-21. ADV. PG. 73-75.
 U. S. Stoneware Co., The, Akron 9, Ohio. 1-11.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif. 17-21. (v)
 Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y. 22.
VITRAMON, INC., Box 544, Bridgeport, Conn. 1-9. ADV. PG. 494.

Wheaton Co., T. C., Electronics Div., Millville, N. J. 22-23.
 Wisconsin Porcelain Co., Sun Prairie, Wis. 19.

CARTRIDGES
 See Crystal Cartridges

CASES—Instrument & Meter
 American Aluminumware Co., 378 Jelliff Ave., Newark 8, N. J.
HUDSON TOOL & DIE CO., 118 S. 14th St., Newark, N. J. ADV. PG. 325.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 369.
 Keystone Watchcase Co., Riverton, N. J.
 Worcester Pressed Steel Co., 101 Barber Ave., Worcester 6, Mass.
 Worcester Stamped Metal Co., 8 Hunt St., Worcester 4, Mass.

CASES, PORTABLE
 (for Radios, Phonographs, Amplifiers, etc.)
ALDEN PRODUCTS CO., 112 N. Main St., Brockton, Mass. ADV. PG. 204, 205.
B & M METAL PRODUCTS CORP., 14 Factory St., Cedar Grove, N. J. ADV. PG. 506.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
 Bennett Mfg. Co., Alden, N. Y.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Central Stamping & Mfg. Co., Polo, Ill.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
CHURCHILL CORP., 844 Franklin St., Melrose 76, Mass. ADV. PG. 446.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Daniels, Inc., C. R., Box 6908, Baltimore, Md.
 Hawley Products Co., St. Charles, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Kollman Show Case Corp., Fort Wayne 1, Ind.
 Lesa, Via Bergamo 21, Milan, Italy.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Product Engineering Laboratories Co., Inc., 314 Adams St., Newark 5, N. J.
REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Scovill Manufacturing Co., Waterbury 20, Conn.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
 Triad Portable Case Corp., 310-314 W. Lincoln Ave., Mount Vernon, N. Y.
 White Rock Mfg. Corp., White Rock, S. C.

CAVITIES—Microwave
 See MICROWAVE ACCESSORIES

CELLS—Photoelectric
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
BRADLEY LABS, INC., 82 Meadow St., New Haven 10, Conn. ADV. PG. 170.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Continental Electric Co., Geneva, Ill.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave., El Segundo, Calif. ADV. PG. 499.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
VICKERS ELECTRIC DIVISION, Vickers, Inc., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 376.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

CELLS—Photovoltaic
BRADLEY LABS, INC., 82 Meadow St., New Haven 10, Conn. ADV. PG. 170.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Photobell Company, 116 Nassau St., New York 7, N. Y.

CELLS—Standard
 Eppley Lab., Inc., The, Newport, R. I.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

OLIS-HONEYWELL REGULATOR CO., Industrial, Wayne & Roberts Aves., Philadelphia 44, Pa. PG. 354, 355.

S—Radio

Co., 305 Franklin St., Boston 10, Mass.
PHENOLIC CORP., 1830 S. 54th Ave., Philadelphia 50, Pa. ADV. PG. 111.
 Products Mfg. Co., Inc., 8127-33 Oleander St., Long Beach 18, La.
 Arnish Co., 1532 S. 50th Court, Chicago 50, Ill.

ST & CUMING CO., INC., 869 Washington St., Boston 10, Mass. ADV. PG. 305.
 Instrument Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Tire & Rubber Co., Inc., Chemical Div., 1144 Market St., Akron 16, Ohio.
 Laboratories, Inc., 322 Bush St., Olean, N. Y. P. O. Box 646, Redlands, Calif.
 Waldstein Co., 2121 McCarter Highway, Newark 4, N. J.
FRUITS CO., New Buffalo, Mich. ADV. PG. 9.
 P., 908 Chicago Ave., Chicago 22, Ill.
 Newark Co., The, Akron 9, Ohio.
MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

Insulation Materials

—Small Drive

Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
MAIN MFG. CO., 110 Mountain Grove St., Hartford 5, Conn. ADV. PG. 521.
 Mecha Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 Inc., Franklin C., 3644 Eastham Drive, San Francisco, Calif.

IS—Ionization

ELECTRONICS CORP., Livingston, N. J. P. O. Box 112, 113.
 Inc., 2649 N. Howard St., Philadelphia 24, Pa.
 Corp., Box 463, Manassas, Va.
 Development Lab., Box 7034, Kansas City, Mo.
 Search & Development, Inc., 1094 Sutter St., San Francisco 5, Calif.
 Corp., 25 S. Broadway, White Plains, N. Y.
 Sific Instrument Co., Inc., 307 Culver Blvd., San Francisco, Calif.
 Rey, Calif.
 Counter Laboratories, Inc., 5122 W. Grove St., Los Angeles 44, Calif.
 Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
 Associates, 140 W. Providencia Ave., Burbank, Calif.
 Inc., 130 High St., Boston 10, Mass.
 Century Electronics, Ltd., Centronics Works, 1000 Kings Drive, New Addington, Surrey, England.
INSTRUMENT CO., 5806 Hough Ave., Cleveland 10, Ohio. ADV. PG. 206, 207.

IS—Shielded Screen

Electronic Sales Co., 23-03 45th Rd., Long Beach 1, N. Y.
ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Electronic Mfg. Co., Inc., Union Bldg., 119 E. St., Pasadena 1, Calif.
SCREEN ROOM, 4515 N. Ravenswood Ave., Long Beach 40, Ill. ADV. PG. 563.
ENCLOSURES CORP., 3624 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 549.

IS—Test

Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 Research Corp., P. O. Box 1121, Bristol, Pa.
TECHNICAL REFRIGERATION DIV., BOWSER, Terryville, Conn. ADV. PG. 366, 367.
INDUSTRIAL COOLERS, 53 W. 4th St., Detroit, Mich. ADV. PG. 548.
 Vacuum Corp., 735 Ridge Rd. W., Rochester, N. Y.
 Electronic Mfg. Co., Inc., Union Bldg., 119 E. St., Pasadena 1, Calif.
SCREEN ROOM, 4515 N. Ravenswood Ave., Long Beach 40, Ill. ADV. PG. 563.
 Zaleski, Inc., 33-66 12th St., Long Island City 1, N. Y.
MILLER INC., 1322 S. Michigan Ave., Chicago 5, Ill. ADV. PG. 610.
 eski, Ltd., Pratt Oval, Glen Cove, N. Y.
 Systems, Inc., 646 W. Washington Blvd., Chicago, Ill.
 Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
ENGINEERING INC., 26 Avenue B, Newark 5, N. J. ADV. PG. 483.

CHAMBERS—Temperature & Humidity

BOWSER TECHNICAL REFRIGERATION DIV. OF BOWSER, INC., Terryville, Conn. ADV. PG. 366, 367.
CONRAD INDUSTRIAL COOLERS, 53 W. 4th St., Detroit, Mich. ADV. PG. 548.
INTERNATIONAL RADIANT CORP., 40 Matinecock Ave., Port Washington, N. Y. ADV. PG. 626.
MURPHY & MILLER, INC., 1322 S. Michigan Ave., Chicago 5, Ill. ADV. PG. 610.
STANDARD CABINET CO., 57 Washington Ave., Carlstadt, N. J. ADV. PG. 619.

CHANGERS—Automatic Record

Birmingham Sound Reproducers, Ltd., Claremont Works, Old Hill, Staffs, England.
 Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. ADV. PG. 291.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
 Lesa, Via Bergamo 21, Milan, Italy.
 Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
 Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee, Wis.
 Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

CHARGERS—Battery

See Battery Chargers

CHASSIS SLIDES

See Slides, Chassis

CHASSIS—Metal

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
 Ainslie Electronic Products, Inc., 312 Quincy Ave., Quincy 69, Mass.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
B & M METAL PRODUCTS CORP., 14 Factory St., Cedar Grove, N. J. ADV. PG. 506.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Bennett Mfg. Co., Alden, N. Y.
BOYLE METALCRAFT CORP., 150 Sullivan St., Brooklyn 31, N. Y. ADV. PG. 226.
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CHURCHILL CORP., 844 Franklin St., Melrose 76, Mass. ADV. PG. 446.
 Craft Mfg. Co., 3949 W. Schubert St., Chicago, Ill.
 Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
DOLIN METAL PRODUCTS, INC., 315 Lexington Ave., Brooklyn 16, N. Y. ADV. PG. 614.
 Donnelly Electric & Mfg. Co., 3050 Washington St., Boston 19, Mass.
 Edo Corp., College Point, N. Y.
 Falstrom Co., 44 Falstrom Court, Passaic, N. J.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FORMICA CO., 110 K St., South Boston, Mass. ADV. PG. 598.
 Gates Radio Co., Quincy, Ill.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HELDOR MFG. CO., DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
KARP METAL PRODUCTS CO., Div. of H & B Machine Co., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 341.
 Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Metalcraft, Inc., 86-08 130th St., Richmond Hill 18, N. Y.
 Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 416.
 Northern Metal Products Co., 3300 W. Lake St., Chicago 24, Ill.
PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 160.
PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 592.
 Rada Products Co., 2911 E. Carroll Ave., Chicago 12, Ill.
 REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.

Scovill Manufacturing Co., Waterbury 20, Conn.
 Shore Engineering Inc., 232 West Ave., Long Branch, N. J.
 Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 262.
 Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

CHECKERS

See also Analyzers

CHECKERS—Cathode Ray Tube

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

CHECKERS—Crystal Rectifier

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.

CHEMICALS—Electronic

Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
 Baker Chemical Co., J. T., Phillipsburg, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
GENERAL CHEMICAL DIV., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y. ADV. PG. 397.
 Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.
 Schott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Calif.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

CHEMICALS—Luminescent

American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
 Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 381.

CHEMICALS—Tube

Baker Chemical Co., J. T., Phillipsburg, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
GENERAL CHEMICAL DIV., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y. ADV. PG. 397.
 Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

NOTE:

Throughout all choke listings: (h) indicates hermetically sealed types

CHOKES—Audio

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536. (h)
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. (h)
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y. (h)
AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. ADV. PG. 238. (h)

AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. (h)
 ADV. PG. 584.
 AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. (h)
 ADV. PG. 119.
 Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind. (h)
 ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. (h)
 ADV. PG. 558.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. (h)
 ADV. PG. 239.
 Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. (h)
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif. (h)
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. (h)
 CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd., Chicago, Ill. (h)
 ADV. PG. 577.
 CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501 Addison St., Chicago 18, Ill. (h)
 ADV. PG. 468.
 COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. (h)
 ADV. PG. 494.
 COMMUNICATION ACCESSORIES CO., Box 7, 110th St., & 71 Hiway, Hickman Hills, Mo. (h)
 ADV. PG. 454, 455.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill. (h)
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill. (h)
 DE COURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. (h)
 ADV. PG. 602.
 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. (h)
 ADV. PG. 498.
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. (h)
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. (h)
 ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. (h)
 ADV. PG. 428.
 EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. (h)
 ADV. PG. 480.
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. (h)
 ADV. PG. 486.
 FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. (h)
 ADV. PG. 148-153.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. (h)
 ADV. PG. 225.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. (h)
 ADV. PG. 219.
 General Transformer Corp., 18240 Harwood Ave., Homewood, Ill. (h)
 Geotronic Labs., Inc., Dallas 11, Texas. (h)
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
 Halldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill. (h)
 HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. (h)
 ADV. PG. 568.
 Industrial Transformer Co., Gouldsboro, Pa. (h)
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. (h)
 ADV. PG. 535.
 K-V Transformer Corp., Danbury, Conn. (h)
 KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. (h)
 ADV. PG. 272.
 LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. (h)
 ADV. PG. 360.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. (h)
 ADV. PG. 322.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. (h)
 ADV. PG. 514.
 OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. (h)
 ADV. PG. 602.
 P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. (h)
 ADV. PG. 580, 581.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. (h)
 ADV. PG. 516.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. (h)
 ADV. PG. 295, Inside Back & Back Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y. (h)
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. (h)
 ADV. PG. 420.
 Rolian Electric Co., 8020 S. Park Ave., Chicago 19, Ill. (h)
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill. (h)
 S. N. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J. (h)
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. (h)
 Standard Transformer Corp., 3571 Elston Ave., Chicago 18, Ill. (h)
 Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y. (h)
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. (h)

Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif. (h)
 Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. (h)
 TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. (h)
 ADV. PG. 583.
 TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. (h)
 ADV. PG. 546.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y. (h)
 TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. (h)
 ADV. PG. 394.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. (h)
 ADV. PG. 488.
 UNITED TRANSFORMER CO., 150 Varlick St., New York 13, N. Y. (h)
 ADV. PG. Inside Front Cover.
 UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. (h)
 ADV. PG. 490.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif. (h)
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif. (h)

CHOKES—Filter

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. (h)
 ADV. PG. 536.
 ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 ADV. PG. 202, 203.
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. (h)
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y. (h)
 AEROCOIL INC., 24 Cliff St., Jersey City, N. J. (h)
 ADV. PG. 587.
 AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. (h)
 ADV. PG. 238.
 AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. (h)
 ADV. PG. 584.
 AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. (h)
 ADV. PG. 119.
 AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. (h)
 ADV. PG. 360.
 Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind. (h)
 ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. (h)
 ADV. PG. 558.
 AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. (h)
 ADV. PG. 414.
 Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. (h)
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif. (h)
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y. (h)
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. (h)
 CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. (h)
 ADV. PG. 470, 471.
 CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd., Chicago, Ill. (h)
 ADV. PG. 577.
 CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501 Addison St., Chicago 18, Ill. (h)
 ADV. PG. 468.
 Coast Coil Co., 5332 W. Washington Blvd., Los Angeles 16, Calif. (h)
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. (h)
 COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. (h)
 ADV. PG. 494.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill. (h)
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill. (h)
 Crittenden Transformer Co., 1220 Nadeau St., Los Angeles, Calif. (h)
 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. (h)
 ADV. PG. 498.
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. (h)
 EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. (h)
 ADV. PG. 332.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. (h)
 ELECTRONIC COILS, INC., Box 1641, 44 Taylor St., Springfield, Mass. (h)
 ADV. PG. 570.
 ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. (h)
 ADV. PG. 428.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill. (h)
 EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. (h)
 ADV. PG. 480.
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. (h)
 ADV. PG. 486.
 FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. (h)
 ADV. PG. 148-153.
 FERRANTI ELECTRIC INC., 30 Rockefeller Plaza, New York 20, N. Y. (h)
 ADV. PG. 225.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. (h)
 Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio. (h)
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. (h)
 ADV. PG. 219.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. (h)
 ADV. PG. 1-18.
 General Transformer Co., 18240 Harwood Ave., Homewood, Ill. (h)
 Geotronic Labs., Inc., Dallas 11, Texas. (h)
 GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. (h)
 ADV. PG. 618.

Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
 Halldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill. (h)
 HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. (h)
 ADV. PG. 568.
 Industrial Transformer Co., Gouldsboro, Pa. (h)
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. (h)
 ADV. PG. 535.
 K-V Transformer Corp., Danbury, Conn. (h)
 KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. (h)
 ADV. PG. 272.
 LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. (h)
 ADV. PG. 360.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif. (h)
 NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. (h)
 ADV. PG. 322.
 Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J. (h)
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. (h)
 ADV. PG. 514.
 OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. (h)
 ADV. PG. 602.
 P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. (h)
 ADV. PG. 580, 581.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. (h)
 ADV. PG. 516.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J. (h)
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. (h)
 ADV. PG. 295, Inside Back & Back Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y. (h)
 Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill. (h)
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. (h)
 ADV. PG. 420.
 Rolian Electric Co., 8020 S. Park Ave., Chicago 19, Ill. (h)
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill. (h)
 S. N. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. (h)
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J. (h)
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. (h)
 Standard Transformer Corp., 3571 Elston Ave., Chicago 18, Ill. (h)
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. (h)
 T V Products Corp., 907 E. 23rd St., Paterson, N. J. (h)
 Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif. (h)
 Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. (h)
 TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. (h)
 ADV. PG. 583.
 TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. (h)
 ADV. PG. 546.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y. (h)
 TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. (h)
 ADV. PG. 394.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif. (h)
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. (h)
 ADV. PG. 488.
 UNITED TRANSFORMER CO., 150 Varlick St., New York 13, N. Y. (h)
 ADV. PG. Inside Front Cover.
 UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. (h)
 ADV. PG. 490.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich. (h)

CHOKES—Power

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. (h)
 ADV. PG. 536.
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. (h)
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y. (h)
 AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. (h)
 ADV. PG. 238.
 AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. (h)
 ADV. PG. 584.
 AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. (h)
 ADV. PG. 119.
 Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind. (h)
 ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. (h)
 ADV. PG. 558.

Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.
 Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
 Electronics Corp., 141 E. 25th St., New York 10, N. Y.
TRANSFORMER CO., 910 W. Jackson Blvd., Chicago 18, Ill. ADV. PG. 577.
TRANSFORMER DIV., ESSEX WIRE CORP., Addison St., Chicago 18, Ill. ADV. PG. 468. (h)
 ers, Inc., 100 New York Ave., Westbury, N. Y.
ELECTRIC CO., 3349 W. Addison St., Chicago ADV. PG. 494.
 ed Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill.
 Transformer Co., 1220 Nadeau St., Los Angeles, Calif.
 Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
ENGINEERING CO., INC., 740 S. 13th St., Chicago 3, N. J. ADV. PG. 332.
 Windings, Inc.—2015 N. Kolmar Ave., Chicago 40, Ill.
TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
COIL CO., INC., Beechwood Ave. & Second St., Mineola, N. Y. ADV. PG. 480.
PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 1, N. Y. ADV. PG. 486.
TELEPHONE & RADIO CORP., 88 Kingsland St., New York, N. J. ADV. PG. 148-153.
ELECTRIC, INC., 30 Rockefeller Plaza, New York, N. Y. ADV. PG. 225.
 Inc., 131-05 Fowler Ave., Flushing, N. Y.
TRANSFORMER CO., INC., 1736 Weirfield St., New York 27, N. Y. ADV. PG. 219.
 Electric Mfg. Co., 4227 Hollis St., Emeryville, Calif.
ELECTRIC CO., Apparatus Sales Div., 1 River Street, New York, N. Y. ADV. PG. 1-18.
 Transformer Co., 18240 Harwood Ave., Homebush, N. S. W., Australia.
 Labs, Inc., Dallas 11, Texas.
ELECTRIC & MFG. CO., 2921 W. Olive St., Los Angeles, Calif. ADV. PG. 618.
 Transformer Corp., 2734 N. Pulaski Rd., Chicago 40, Ill.
 Robert M., 5112 S. Hoover St., Los Angeles 4, Calif.
 Transformer Co., 4500 Ravenswood Ave., Oakland 12, Calif.
ENGINEERING CO., Main St. & Urban Ave., New York, N. Y. ADV. PG. 568.
 Transformer Co., Gouldsboro, Pa.
 Transformer Corp., Danbury, Conn.
TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.
MANUFACTURING CORP., 37 W. 65th St., New York, N. Y. ADV. PG. 360.
 & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
 Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, Ill.
TRANSFORMER CORP., Third Ave., Alpha, N. Y. ADV. PG. 322.
 Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
MFG. CO., 4835 W. Flounoy St., Chicago 44, Ill. ADV. PG. 92.
TER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.
ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
 Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
 Electrical Products Div. of Altec Lansing Corp., 100 Monica Blvd., Beverly Hills, Calif. (h)
X CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 Versions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
 Transformer Co., Inc., 532 Mulberry St., New York, N. Y.
 Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
MFG. CO., Equipment Sales Div., Waltham, Mass. ADV. PG. 420.
 Co., 2405 Armitage Ave., Chicago 47, Ill.
 Industrial Electronics Co., 2831 Post Oak Dr., Box 13058, Houston 19, Texas. (h)
 Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 t Mfg. Corp., 391 Saw Mill River Rd., New York, N. Y. (h)
 Electronics Corp., 289 Emmet St., Newark 5, N. J.
 telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Transformer Corp., 3571 Elston Ave., Chicago 13, Ill.
 Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Electric Products Corp., 46 Oliver St., Newark, N. J. (h)

Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif. (h)
 Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. (h)
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

CHOKES—r-f (Heavywire Low Voltage)

ACE COIL & ELECTRONICS CO., 914 Middlesex Ave., Metuchen, N. J. ADV. PG. 402.
AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Condor Radio Mfg. Co., 2705 S. Kramer Ave., Tuscon, Ariz.
 Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 Electricoil Transformer Co., Westerly Rd., Ossining, N. Y. (h)
ELECTRONIC COILS, INC., Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 570.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
 Fast & Co., John E., 3157 N. Pulaski Rd., Chicago 41, Ill.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 554.
 Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8, Calif.
 Gates Radio Co., Quincy, Ill.
GUTHMAN INC., EDWIN I., 15 Throop St., Chicago 11, Ill. ADV. PG. 414.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 K-V Transformer Corp., Danbury, Conn.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
OHMITE MFG. CO., 4835 W. Flounoy St., Chicago 44, Ill. ADV. PG. 92.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420. (h)
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 615.
 Rolan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 430, 431.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Thordarson-Meissner Mfg. Div., Mt. Carmel, Ill. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

CHOKES—r-f & i-f

ACE COIL & ELECTRONICS CO., 914 Middlesex Ave., Metuchen, N. J. ADV. PG. 402.
AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
 Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Condor Radio Mfg. Co., 2705 S. Kramer Ave., Tuscon, Ariz.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498. (h)
 Electricoil Transformer Co., Westerly Rd., Ossining, N. Y. (h)
ELECTRONIC COILS, INC., P. O. Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 570.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 554.
 Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.
GUTHMAN, INC., EDWIN I., 15 Throop St., Chicago, Ill. ADV. PG. 414.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 596.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 443.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
 Lewis Spring & Mfg. Corp., 2646 W. North Ave., Chicago 47, Ill.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
OHMITE MFG. CO., 4835 W. Flounoy St., Chicago 44, Ill. ADV. PG. 92.
OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420. (h)
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 615.
 Rolan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
SICKLES F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass. ADV. PG. 357. (h)
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 430, 431.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 490.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif. (h)
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

CHOPPERS—DC-AC

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 119.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
 Bristol Co., The, Waterbury 20, Conn.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
 James Vibrapower Co., 4036 N. Rockwell St., Chicago 18, Ill.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.

STEVENS-ARNOLD INC., 22 Elkins St., South Boston, Mass. ADV. PG. 549.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

CHRONAXIMETERS

Electro-Medical Lab., Inc., South Woodstock 8, Vt.

CHRONOGRAPHS—Inertialess

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Electrodyn Co., Endicott St., Norwood, Mass.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.

CHRONOSCOPES

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mount Vernon, N. Y. ADV. PG. 546.
Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.

CIRCUITS—Plug-In

Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 4, Calif.

CIRCUITS—Potted

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
ELECTRALAB, INC., 105 First St., Cambridge, Mass. ADV. PG. 432.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
Geotronic Labs, Inc., Dallas 11, Texas.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
OSSIAN MFG. CO., Box 151A, Ossian, Ind. ADV. PG. 567.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Transvion, Inc., 460 North Ave., New Rochelle, N. Y.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

CIRCUITS—Printed, Stamped or Etched

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
Anderson & Sons, Inc., Westfield, Mass.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
CARDWELL MFG. CORP., ALLEN D., 97 Whiting St., Plainville, Conn. ADV. PG. 410.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CENTRONICS CO., 21-04 122 St., College Point, N. Y. ADV. PG. 607.
Circuitron, Inc., 400 Ninth St., Hoboken, N. J.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. ADV. PG. 524.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.

Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
ELECTRALAB, INC., 105 First St., Cambridge, Mass. ADV. PG. 432.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
Essex Electronics, Berkeley Heights, N. J.
Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
Herlec Corp., 422 N. Fifth St., Milwaukee 3, Wis.
Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
Javex, P. O. Box 646, Redlands, Calif.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
Maico Development Co., 12 E. Howard St., Phoebus, Va.
Metaplast Process Inc., 9-17 37th Ave., Long Island City 1, N. Y.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 450.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
PANELYTE DIV., ST. REGIS SALES CORP., 230 Park Ave., New York 17, N. Y. ADV. PG. 339.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 566.
Printed Cellophane Tape Co., 521 N. La Brea Ave., Los Angeles 36, Calif.
RADO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
SICKLES, F. W., DIV., GENERAL INSTRUMENT CORP., 165 Front St., Chicopee, Mass. ADV. PG. 357.
Solar Mfg. Corp., 2660 E. 46th St., Los Angeles, Calif.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
Technograph Printed Electronics, Inc., 191 Main St., Tarrytown, N. Y.
Techron Co., 254-256 Friend St., Boston 14, Mass.
Telex, Inc., Telex Park, St. Paul 1, Minn.
Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.
Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
U. S. COMPONENTS, INC., 454 E. 148th St., New York 55, N. Y. ADV. PG. 313.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
Wheaton Co., T. C., Electronic Div., Millville, N. J.

CLAMPS for TUBES

Adel Div. of General Metals Corp., 10777 Van Owen St., Burbank, Calif.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
AUGAT BROS., INC., 33 Perry Ave., Attleboro, Mass. ADV. PG. 537.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
Bircher Corp., 4371 Valley Blvd., Los Angeles 32, Calif.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Buck Engineering Co., 37-41 Marcy St., Freehold, N. J.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Elco Corporation, 190 W. Glenwood Ave., Philadelphia 40, Pa.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 384.

TINNERMAN PRODUCTS INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 155.
Transformer Metal Products Corp., 343 W. 26th New York, N. Y.

CLIPS—Fuse

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
Atlas E-E Corp., 312 Stuart St., Boston 16, Mass.
BEL-FUSE, INC., 311 Mountain Rd., Union City, N. J. ADV. PG. 602.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BRAUN TOOL & INSTRUMENT CO., INC., H., 140 Fifth Ave., Hawthorne, N. J. ADV. PG. 346.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BUSSMAN MFG. CO., St. Louis 7, Mo. ADV. PG. Dante Electric Mfg. Co., Bantam, Conn.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron Chicago 10, Ill. ADV. PG. 394.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
LITTELFUSE, INC., Des Plaines, Ill. ADV. PG. 41.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
Reliable Spring & Wire Forms Co., Fulton Rd. & Park Ave., Cleveland 9, Ohio.
SHERMAN MFG. CO., H. B., 22 Barney St., Bay Brook, Mich. ADV. PG. 529.
Smith, Inc., Herman H., 436 18th St., Brooklyn 1, N. Y.
Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

CLIPS—Grid

AEROLITE ELECTRONICS CORP., 506 26th St., Union City, N. J. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
BRAUN TOOL & INSTRUMENT CO., INC., H., 140 Fifth Ave., Hawthorne, N. J. ADV. PG. 346.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 2, Ill. ADV. PG. 200, 201.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-405.
Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
Smith, Inc., Herman H., 436 18th St., Brooklyn 1, N. Y.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

CLIPS—Test

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
Frankel Connector Co., 27 Vestry St., New York, N. Y.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
Mueller Electric Co., 1583 E. 31st St., Cleveland 14, Ohio.
RAPID SPECIALTIES CO., 327 W. Huron St., Chicago 10, Ill. ADV. PG. 608.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 155.
Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.

CLOTHS—Speaker Grille

Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.

CLOTHS—Woven Wire

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 416.
 Roebbing's Sons Co., John A., 640 Broad St., Trenton 2, N. J.

COATINGS—Conductive

See also Graphite, Colloidal

Acheson Colloids Co., 1950 Washington Ave., Port Huron, Mich.
 Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
 Beck's, Inc., 298-300 E. Fifth St., St. Paul 1, Minn.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Electrochemical Industries, Inc., Jacques St., Worcester, Mass.
 Electro-Coatings, Inc., 1662 W. Fullerton Ave., Chicago 14, Ill.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 Javex, P. O. Box 646, Redlands, Calif.
 Metaplast Process Inc., 9-17 37th Ave., Long Island City 1, N. Y.
 Metz Refining Co., 369 Mulberry St., Newark 2, N. J.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
 Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
 Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
 Pierce & Stevens, Inc., Buffalo 3, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Techron Co., 254-256 Friend St., Boston 14, Mass.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.

COATINGS-CONDUCTIVE—Tube Interior

Acheson Colloids Co., 1950 Washington Ave., Port Huron, Mich.
 American Resinous Chemicals Co., 103 Foster St., Peabody, Mass.
 Electro-Coatings, Inc., 1662 W. Fullerton Ave., Chicago 14, Ill.
 Metaplast Process Inc., 9-17 37th Ave., Long Island City 1, N. Y.
 Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.

COATINGS—Protective

*Indicates Service Coating only.

Acme Wire Co., New Haven 14, Conn.
 Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
 American Chemical Paint Co., Ambler, Pa.
 American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
CIBA CO., INC., 627 Greenwich St., New York 14, N. Y. ADV. PG. 377.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Dow Chemical Co., Midland, Mich.
 Dow Corning Corp., Midland, Mich.
 du Pont de Nemours & Co., E. I., Wilmington 98, Del.
 Electro-Coatings, Inc., 1662 W. Fullerton Ave., Chicago 14, Ill.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 Enthone, Inc., 442 Elm St., New Haven 2, Conn.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Plastics Corp., 1011 Main Ave., Clifton, N. J.
 Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Javex, P. O. Box 646, Redlands, Calif.
KELLOGG CO., M. W., P. O. Box 469, Jersey City 3, N. J. ADV. PG. 139-142.
 Lukens Steel Co. and Division, By-Products Steel Co. and Lukens, 447 Luken Building, Coatesville, Pa.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.

Midland Industrial Finishes Co., Waukegan, Ill.
 Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.
 Pierce & Stevens, Inc., Buffalo 3, N. Y.
 Production Engineering Co., 173 Sargeant Ave., Clifton, N. J.
 Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis 4, Ind.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schenectady Varnish Co., Schenectady, N. Y.
SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 626.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
 Stevenson, Bro. & Co., 110 Race St., Philadelphia 6, Pa.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

COATINGS—Salt Spray Resistance

*Indicates Service Coating only.

American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Electro-Coatings, Inc., 1662 W. Fullerton Ave., Chicago 14, Ill.
 Enthone, Inc., 442 Elm St., New Haven 2, Conn.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 General Plastics Corp., 1011 Main Ave., Clifton, N. J.
 Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Javex, P. O. Box 646, Redlands, Calif.
KELLOGG CO., M. W., P. O. Box 469, Jersey City 3, N. J. ADV. PG. 139-142.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
 Midland Industrial Finishes Co., Waukegan, Ill.
 Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
 Pierce & Stevens, Inc., Buffalo 3, N. Y.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schenectady Varnish Co., Schenectady, N. Y.
 Special Chemicals Corp., 30 Irving Pl., New York, N. Y.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island, N. Y.
 Stevenson, Bro. & Co., 110 Race St., Philadelphia 6, Pa.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

CODE & TAB MARKERS

Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
 Printed Cellophane Tape Co., 521 N. La Brea Ave., Los Angeles 36, Calif.
 Tablet & Ticket Co., 1021 W. Adams St., Chicago 7, Ill.
 Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Topflight Tape Co., 116 E. Market St., York, Pa.

COIL WINDING MACHINES

See Machines—Coil Winding

COILS

See Inductances

COLORIMETERS—Photoelectric

Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Farrand Optical Co., Inc., 1 Bronx Blvd. at 238th St., New York 70, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
 Manufacturers Engineering & Equipment Corp., York & Mill Rds., Hatboro, Pa.
 Missouri Research Labs., 2109 Locust St., St. Louis 3, Mo.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

COLUMBIUM

See Metals

COMMUNICATION SYSTEMS

1. Aircraft
2. Airport Traffic Control
3. Carrier Current
4. Facsimile
5. Induction
6. Marine Radio-Telephone
7. Microwave
8. Portable Installation
9. Railroad
10. Teletype
11. Vehicular

Acme Electronix Div. of NEA Service Inc., West Third & Lakeside, Cleveland 13, Ohio. 4-8.
 Aeronautical Communication Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla. 1.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C. 2.
AIR ASSOCIATES, INC., Teterboro, N. J. 1-2-3-4-5. ADV. PG. 329.
AIRCRAFT RADIO CORP., Boonton, N. J. 1-8. ADV. PG. 168.
 Alden Systems, Inc., Alden Research Center, Westboro, Mass. 4-8-9.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. 2.
 American Electroengineering Corp., 2040 Colorado Ave., Santa Monica, Calif. 1-7.
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass. 2-4-7.
 Applied Electronics Co., Inc., 1746 Folsom St., San Francisco 3, Calif. 6-11.
 Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif. 1-8.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 3-10-11. ADV. PG. 239.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla. 1-6.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y. 2-6-7.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio. 8.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md. 1-2-8-9-11.
 Bludworth Marine Div., National Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. 6.
BRAUN TOOL & INSTRUMENT CO., INC., H., 140 Fifth Ave., Hawthorne, N. J. 1-7. ADV. PG. 346.
 Carad Corp., 93 Leland Ave., San Francisco 28, Calif. 3.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England. 2.
 Codetyp Laboratories, 550 Fifth Ave., New York 19, N. Y. 10.
COLLINS RADIO CO., Cedar Rapids, Iowa. 1-2. ADV. PG. 82, 83.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. 3-10. ADV. PG. 454, 455.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla. 1-2-6-8-11.
 Condor Radio Mfg. Co., 2705 S. Kramer Ave., Tucson, Ariz. 8-11.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. 1-8. ADV. PG. 590.
 Continental Electronics Ltd., 302 Oakland St., Brooklyn 22, N. Y. 10.
 Daimotron Co., 534 Laurel St., San Carlos, Calif. 8.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. 7.
DOLLAR CO., ROBERT, Communications Equipment Div., 50 Drumm St., San Francisco 11, Calif. 10. ADV. PG. 591.
DORNE AND MARGOLIN, 30 Sylvester St., Westbury, N. Y. 1. ADV. PG. 569.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y. 1-2-6-8-9-11.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich. 8-11.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y. 2-6-10.
 Farmers Engineering & Mfg. Co., Irwin, Pa. 3-9.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 2-3-7-9-11. ADV. PG. 148-153.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. 3-8-9-11.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif. 1-6.
 Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y. 2-4.
 Gates Radio Co., Quincy, Ill. 2-6-8.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 3. ADV. PG. 1-18.
 Gray Radio Co., 501 Forest Hill Blvd., West Palm Beach, Fla. 6.
 Heintz & Kaufman Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif. 10.
 Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y. 4.
 Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y. 6.
 Kaar Engineering Co., 2995 Middlefield Road, P. O. Box 1320, Palo Alto, Calif. 6-9-11.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. 2. ADV. PG. 38, 39.
 Lear, Inc., 110 Ionia Ave. N.W., Grand Rapids 2, Mich. 1-2.

LENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. 3-7. ADV. PG. 540.
 LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. 7. ADV. PG. 575.
 Lesa, Via Bergamo 21, Milan, Italy. 3.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif. 3-6-7-9-10.
 Lyso Mfg. Co., 82 Herman St., East Rutherford, N. J. 6-11.
 MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. 1. ADV. PG. 328.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. 1-2-4-6-8-9-10-11.
 MAXSON CORP., W. L., 460 W. 34th St., New York 34, N. Y. 1-7. ADV. PG. 144.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada. 6-10-11.
 Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas. 1.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 10.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill. 3-7-8-9-11.
 Muirhead & Co., Ltd., Beckman, Kent, England 4.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England. 6-8.
 National Aeronautics Corp., 180 S. Main St., Ambler, Pa. 1.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio. 2.
 NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. 10. ADV. PG. 196-198.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill. 2.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa. 7.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J., General Offices. 7-8. ADV. PG. 295. Inside Back & Back Covers.
 RADIO FREQUENCY LABS., INC., Boonton 2, N. J. 10. ADV. PG. 512.
 Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore. 8-11.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo. 3-9.
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. 6-7. ADV. PG. 420.
 Schuttig & Co., Inc., 9th & Kearney Sts., N. E., Washington 17, D. C. 2.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J. 6.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. 1-2-3-4-6-7-8-9-11.
 STELMA, INC., 389 Ludlow St., Stamford, Conn. 10. ADV. PG. 601.
 Stromberg-Carlson Co., Rochester 3, N. Y. 8.
 T. L. G. Electric Corp., 31 W. 27th St., New York 1, N. Y. 1-2-3-10.
 Technical Materiel Corp., The, P. O. Box 142, Mamaroneck, N. Y. 10-11.
 TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. 4. ADV. PG. 384.
 TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. 6. ADV. PG. 234.
 Transiton, Inc., 154 Spring St., New York 12, N. Y. 1-3-7-8-11.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y. 1-2-6-7-8-11.
 U. S. Instrument Corp., 409 Broad St., Summit, N. J. 8-9.
 Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa. 3.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 6, Calif. 9-11.
 Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y. ADV. PG. 4-10.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J. 2-11.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo. 1.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y. 2-4.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y. 11.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y. 1-4-11.

COMPARATORS—Automatic Resistance
 See Instruments—Electrical Measuring

COMPARATORS—Capacitance

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Carlson & Nicholson, Inc., 497 Maynard Drive, Buffalo 21, N. Y.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cleveland 14, Ohio.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

COMPARATORS—Circuit Linearity
COMPARATORS—Crystal
 See Instruments—Electrical Measuring

COMPARATORS—Dielectric

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

COMPARATORS—Inductance

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Carlson & Nicholson, Inc., 497 Maynard Drive, Buffalo 21, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

COMPARATORS—Iron Core

Carlson & Nicholson, Inc., 497 Maynard Drive, Buffalo 21, N. Y.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.

COMPARATORS—Surface
 See Analyzers—Surface

COMPARATORS—Voltage
 See Instruments—Electrical Measuring

COMPASSES—Electronic Gyro

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
 KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.

COMPOUNDS—Potting

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
 BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 506.
 Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.
 EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.
 Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.
 HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20, N. Y. ADV. PG. 567.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

COMPUTERS—Analog

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 Analex Corporation, Concord, N. H.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
 BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 COMPUTER CORP. OF AMERICA, 149 Church St., New York, N. Y. ADV. PG. 594.
 Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. ADV. PG. 157.

FRANKLIN ELECTRONICS, INC., 415 W. Pike Philadelphia 40, Pa. ADV. PG. 575.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 R. Schenectady 5, N. Y. ADV. PG. 1-18.
 Goodyear Aircraft Corp., 1210 Massillon Road, Dayton 65, Akron 15, Ohio.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
 KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
 LABORATORY FOR ELECTRONICS, INC., 75 Pittsfield Boston 14, Mass. ADV. PG. 38, 39.
 Librascope, Inc., 1607 Flower St., Glendale 1, Calif.
 Miller Corp., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Minnesota Electronics Corp., 47 W. Water St., St. Louis 1, Minn.
 Missouri Research Labs., 2109 Locust St., St. Louis 8, Mo.
 Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
 Reeves Instrument Corp., 215 E. 91st St., New York 17, N. Y.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
 Ruska Instrument Corp., 4607 Montrose Blvd., Houston 6, Texas.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
 SERVOMECHANISMS, INC., Post & Stewart Aves., Newbury, N. Y. ADV. PG. 426.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Tallier & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

COMPUTERS—Digital

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 Analex Corporation, Concord, N. H.
 APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44, Princeton, N. J. ADV. PG. 386.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
 BURROUGHS CORP., Electronic Instruments Div., 511 Broad St., Philadelphia 23, Pa. ADV. PG. 211-212.
 Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.
 Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 DIGITAL CONTROL SYSTEMS, INC., 7858 Iva Ave., P. O. Box 779, La Jolla, Calif. ADV. PG. 566.
 Electronic Computer Div., Underwood Corp., 160 Pine Ave., New York 13, N. Y.
 Engineering Research Associates, Div. of Remington-Union, 1902 W. Minnehaha Ave., St. Paul, Minn.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike Philadelphia 40, Pa. ADV. PG. 575.
 Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.
 Hogan Laboratories, Inc., 155 Perry St., New York 11, N. Y.
 International Research Associates, 2221 Warwick St., Santa Monica, Calif.
 Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md.
 LABORATORY FOR ELECTRONICS, INC., 75 Pittsfield Boston 14, Mass. ADV. PG. 38, 39.
 Librascope, Inc., 1607 Flower St., Glendale 1, Calif.
 MAXSON CORP., W. L., 460 W. 34th St., New York 18, N. Y. ADV. PG. 144.
 Minnesota Electronics Corp., 47 W. Water St., St. Louis 1, Minn.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
 Tallier & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
 TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 514.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

COMPUTERS—Electronic
 See Machines

CONDENSERS
 See Capacitors

CONES—Speaker

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Hawley Products Co., St. Charles, Ill.
 Lansing Sound, Inc., James B., 2438 Fletcher Drive, Los Angeles 26, Calif.
 Stevens Products Inc., 86-88 Main St., East Orange, N. J.

CONNECTORS

1. Anode
2. Audio
3. Antennae
4. Coaxial Cable
5. Diode
6. Electrical, AN or MIL-C-5015
7. Interlock
8. Phono
9. Power
10. Printed Circuit
11. R-F
12. Subminiature
13. Waterproof

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio. 2-3-5-7-8-9.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. 1-2-5-7-8. ADV. PG. 585.
 Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa. 6-9-10-12-13.
AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. 9. ADV. PG. 534.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. 2-3-5-7-8-9-10-11-12-13. ADV. PG. 204, 205.
 Allied Industries, Inc., 1023 S. 21st St., Louisville 10, Ky. 4.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. 2-3-4-6-8-9-11-13. ADV. PG. 111.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. 3-4. ADV. PG. 556.
 Associated Engineering Corp. of Boston, 38 Euston Rd., Brighton 35, Mass. 2-9.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. 9. ADV. PG. 302.
 Automatic Metal Products Co., 315 Berry St., Brooklyn 11, N. Y. 4-11-13.
 Automatic & Precision Mfg. Co., 315 E. 91st St., New York 28, N. Y. 6-9.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 4. ADV. PG. 239.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn. 10.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y. 11.
BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J. 6. ADV. PG. 319.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 1-2-3-4-8-9-11-13.
 Brookhaven Electronics Corp., Box 931, Sanford, N. C. 3-4-11.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y. 4-11.
BUGGIE & CO., H. H., 726 Stanton St., Toledo, Ohio. 4-6-9-11-12-13. ADV. PG. 422.
 Burnby Engineering Co., Inc., Norwalk, Conn. 4.
 Cable Electric Products Co., Providence, R. I. 2-6.
CANNON ELECTRIC CO., 3209 Humboldt St., Los Angeles 31, Calif. 2-4-6-9-12-13. ADV. PG. 491.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. 2-6-9-12.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. 2-7-8-9-10-11-12. ADV. PG. 200, 201.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. 1-2-5-8-10-12. ADV. PG. 618.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. 1-2-3-4-6-8-9-11-12-13. ADV. PG. 260.
CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. 6. ADV. PG. 125.
CONTINENTAL CONNECTOR CORP., 30-30 Northern Blvd., Long Island City, N. Y. 6-10-12. ADV. PG. 370.
 Dage Electric Co., 67 N. Second St., Beech Grove, Ind. 2-3-4-11-13.
 Darte Electric Mfg. Co., Bantam, Conn. 3.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. 6-9-10-12-13. ADV. PG. 370, 371.
DIALIGHT CORPORATION, 60 Stewart Ave., Brooklyn 37, N. Y. 2-3-8. ADV. PG. 348.
 Diamond Mfg. Corp., 7 North Ave., Wakefield, Mass. 4-11-12.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y. 6.
BY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. 2-3-7-8-10-13. ADV. PG. 523.
ITEL-McCULLOUGH, INC., San Bruno, Calif. 1. ADV. PG. 378, 379.
 Ico Corporation, 190 W. Glenwood Ave., Philadelphia 40, Pa. 2-7-8-9-10-11-12.
 Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y. 4.
 Equipment & Service Co., 6815 Oriole Drive, Dallas 9, Texas. 9-13.
IE RESISTOR CORP., 644 W. 12th St., Erie, Pa. 10. ADV. PG. 121.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. 1. ADV. PG. 1-18.
GENERAL ELECTRIC CO., WIRING DEVICE DEPT., Providence 7, R. I. 6. ADV. PG. 496.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. 7.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill. 1-3-5-7-9.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 4-11. ADV. PG. 90, 91.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. 3-4-11. ADV. PG. 446.
 Glaser-Steers Corp., 2 Main St., Belleville 9, N. J. 2-6.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, Conn. 4.
 Harvey Hubbell, Inc., State St. & Bostwick Ave., Bridgeport 2, Conn. 7.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. 6-12-13. ADV. PG. 235.
 Hobson Brothers, 4049 W. Fullerton St., Chicago 39, Ill. 1.
HOPKINS ENGINEERING CO., 2082 Lincoln Ave., Altadena, Calif. 4-6-13. ADV. PG. 547.
 Industrial Products Co., Danbury, Conn. 3.
INSTRUMENT COMPONENTS, INC., 1834 Franklin St., Santa Monica, Calif. 12. ADV. PG. 277.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. 1-2-3-4-8-9. ADV. PG. 535.
 Javex, P. O. Box 646, Redlands, Calif. 3.
 Jen Products, Inc., 419 W. 42nd St., New York, N. Y. 7-9.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa. 4.
JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. 3. ADV. PG. 200, 201.
 Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa. 4.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. 5.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. 2-3-4-11-13. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y. 10.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y. 8-9.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. 10-12. ADV. PG. 384.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 2-8-13.
 Mandex Corp., 2608 W. 16th St., Chicago 8, Ill. 1.
MENDELSON SPEEDGUN CO., INC., 457 Bloomfield Ave., Bloomfield, N. J. 4-11. ADV. PG. 599.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. 6-10. ADV. PG. 450.
 Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif. 2-3-4-10-11-12-13.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla. 13.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 2-3-4-6-11-13.
NATIONAL TEL-TRONICS CORP., 35 St. Casimir Ave., Yonkers, N. Y. 1. ADV. PG. 332.
NEOMATIC, INC., 9010 Bellanca Ave., Los Angeles 45, Calif. 12. ADV. PG. 336.
PRODELIN, INC., 307 Bergen Ave., Kearny, N. Y. 4. ADV. PG. 306.
 Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill. 4-13.
 Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio. 4.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y. 3-4.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill. 7.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. 2-13.
 Riverside Metal Co., The Riverside, N. J. 6.
 Rofan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass. 4-6-11-12.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. 13. ADV. PG. 545.
SCINTILLA MAGNETO DIV., BENDIX AVIATION CORP., Sidney, N. Y. 6-9-13. ADV. PG. 131.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y. 4-11-13.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y. 1-3-4-7-8.
STAYER CO., INC., Box 431, Bay Shore, N. Y. 3-8. ADV. PG. 353.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-3-5-7-8-9-10-12. ADV. PG. 654-660.
 T.L.G. Electric Corp., 31 W. 27th St., New York 1, N. Y. 6.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. 4. ADV. PG. 562.
 Telegraph Construction & Maintenance Co., Ltd., Telecon Works, Greenwich, London S. E. 10, England. 3-4.
 Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif. 4-11-12-13.
 Tensor Electric Development Co., Inc., 343 Classon Ave., Brooklyn 5, N. Y. 2-9-11.
 Thomas & Betts Co., 36 Butler St., Elizabeth 1, N. J. 4-6.
 Tru-Connector Corp., 416 Union St., Lynn, Mass. 3-4-11-12-13.
UCINITE CO., Div. of United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. 1-3-4-8-10. ADV. PG. 398.
 U.H.F. Resonator Corp., 224 Seventh St., Racine, Wis. 3.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass. 1. ADV. PG. 399.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. 3. ADV. PG. Inside Front Cover.
U. S. COMPONENTS, INC., 454 E. 148th St., New York 55, N. Y. 6-10-12-13. ADV. PG. 313.

U. S. GASKET CO., P. O. Box 93, Camden, N. J. 1-2-3-6-7-8-9-11-12-13. ADV. PG. 530, 531.
WALTHAM HOROLOGICAL CORP., 711 Broad St., Lynn, Mass. 3-4-11-12-13. ADV. PG. 553.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 4-5.
WINCHESTER ELECTRONICS, INC., 15 Crescent Rd., Glenbrook, Conn. 6-9-10-12. ADV. PG. 174.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J. 6.

CONTACTORS

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. ADV. PG. 194, 195.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio.
 Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 253.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
R.B.M. DIVISION, ESSEX WIRE CORP., Logansport, Ind. ADV. PG. 261.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Trumbull Electric Dept. of General Electric Co., Plainville, Conn.
 Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 317, 318.
 Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

CONTACTS—Electrical

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Baker Co., Inc., 113 Astor St., Newark 5, N. J.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 521.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
BRAININ CO., C. S., 320 Washington St., Mt. Vernon, N. Y. ADV. PG. 598.
BRAUN TOOL & INSTRUMENT CO., INC., H., 140 Fifth Ave., Hawthorne, N. J. ADV. PG. 346.
BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J. ADV. PG. 319.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Dage Electric Co., 67 N. Second St., Beech Grove, Ind.
 Eico Corporation, 90 W. Glenwood Ave., Philadelphia 40, Pa.
 Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia 25, Pa.
FANSTEEL METALLURGICAL CORP., 2206 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gibson Electric Co., 8361 Frankstown Ave., Pittsburgh 21, Pa.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 240, 241.
 Javex, P. O. Box 646, Redlands, Calif.
 Keystone Carbon Co., Inc., Saint Marys, Pa.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
UNITED CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 399.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 595.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

CONTROLS—Alarm System

Bristol Co., The, Waterbury 20, Conn.
 Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Dondar Devices, P. O. Box 187, La Canada, Calif.
 EDISON INC., THOMAS A., Instrument Div., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 300, 301.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 164-167.
 KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Modelectric Products Corp., 1500 Banks Ave., Asbury Park, N. J.
 North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
 SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York 11, N. Y. ADV. PG. 418.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Worner Electronic Devices, Rankin, Ill.

CONTROLS—Automatic Tuning

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
 STAYER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 353.

CONTROLS—Automatic Voltage Regulating

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Associated Engineering Corp. of Boston, 38 Euston Rd., Brighton 35, Mass.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Burlington Instrument Co., Burlington, Iowa.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
 ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 220.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. ADV. PG. 340.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
 KALBELL LABS, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.

KEPCO LABS., INC., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 25-27.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 437.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
 SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, Ill. ADV. PG. 536.
 SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 62, 63.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 VICKERS ELECTRIC DIVISION, Vickers, Inc., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 376.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

CONTROLS—Capacitance Operated

AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Niagara Electron Laboratories, Andover, N. Y.
 Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

CONTROLS—Chemical

Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Foxboro Co., The, Foxboro, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
 LaMotte Chemical Products Co., Towson 4, Baltimore, Md.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Niagara Electron Laboratories, Andover, N. Y.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.

CONTROLS—Counting & Sorting

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Autotron Co., The, Danville, Ill.
 BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Brinnell Company, The, Simsbury, Conn.
 Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Counter and Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Eagle Signal Corp., Moline, Ill.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.

R-C Scientific Instrument Co., Inc., 307 Playa del Rey, Calif.
 Rutherford Electronics Co., 3707 S. Robinson Ave., Culver City, Calif.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 17, Ill.
 WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Worner Electronic Devices, Rankin, Ill.

**CONTROLS—Density
See Controls, Specific Gravity**

CONTROLS—Dimension

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Robinette Co., W. C., 802 Fair Oaks Ave., Pasadena, Calif.
 Sterling Instruments Co., 15310 W. McNichols Rd., Farmington Hills, Mich.
 TELETRONICS LABORATORY, INC., Kinkaid St., Teterboro, N. Y. ADV. PG. 287.

CONTROLS—Door

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 A. R. F. Products, Inc., 7627 Lake St., Riverdale, Ill.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Federal Electric Products Co., 50 Paris St., Newark 11, N. J.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Holtzer-Cabot, Div. of National Pneumatic Control Co., Amory St., Boston 19, Mass.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 437.
 Multi-Products Co., 559 E. Ten Mile Rd., Detroit 10, Mich.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
 Stanley Works, The, 195 Lake St., New Britain, Conn.

CONTROLS—Electric Motor

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 1, Wis.
 Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Bristol Co., The, Waterbury 20, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Counter and Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Federal Electric Products Co., 50 Paris St., Newark 11, N. J.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gleason-Avery, Inc., Auburn, N. Y.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 437.
 Northeastern Engineering Inc., Manchester, N. H.
 OPAD-GREEN CO., 71-5 Warren St., New York 10, N. Y. ADV. PG. 479.
 R. B. M. DIVISION ESSEX WIRE CORP., Lansing 1, Mich. ADV. PG. 261.
 Railway Communications, Inc., Smith Rd. & Raytown, Mo.
 Reynolds Electric Co., 3000 River Rd., Riverdale, Ill.
 Spencer Thermostat Div., Metals & Controls Corp., Forest St., Attleboro, Mass.
 Square D Co., 4041 N. Richards, Milwaukee 1, Wis.
 Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

Trumbull Electric Dept. of General Electric Co., Plainville, Conn.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 317, 318.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

Mercoid Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
 White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.

Filters, Inc., Electroquipt Controls Div., 30 Sagamore Hill Drive, Port Washington, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 550.
NORRMAN LABORATORIES, ERNST, Williams Bay, Wis. ADV. PG. 620.
 Northeastern Engineering Inc., Manchester, N. H.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
 Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

CONTROLS—Electronic Motor

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Bayne Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
ECLIPSE-PIONEER DIV. BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
 Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 L & O Research & Development Corp., 315 S. 15th St., Philadelphia 2, Pa.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 Northeastern Engineering Inc., Manchester, N. H.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
BAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Robbette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
 Soley Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Semspeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
 Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
 Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
 Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

CONTROLS—Elevator Leveling

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

CONTROLS—Film Thickness

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Niagara Electron Laboratories, Andover, N. Y.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.

CONTROLS—Flame Failure

Bristol Co., The, Waterbury 20, Conn.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
GENERAL CONTROLS CO., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

CONTROLS—Fluid Conductivity

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Foxboro Co., The, Foxboro, Mass.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.
 Niagara Electron Laboratories, Andover, N. Y.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.

CONTROLS—Fluid Flow

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bar-Ray Products, Inc., 239 23rd St., Brooklyn 32, N. Y.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bristol Co., The, Waterbury 20, Conn.
 Control Engineering Div., 250 Providence Highway, Norwood, Mass.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Eagle Signal Corp., Melroe, Ill.
ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 344.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Modelectric Products Corp., 1500 Banks Ave., Asbury Park, N. J.
 Niagara Electron Laboratories, Andover, N. Y.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
ROTRON MFG. CO., INC., 7-7 Schoonmaker Lane, Woodstock, N. Y. ADV. PG. 136.
TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. ADV. PG. 604.

CONTROLS—Food Processing

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television Ltd., Worsley Bridge Pd., London, S.E. 26, England.
 Foxboro Co., The, Foxboro, Mass.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Modelectric Products Corp., 1500 Banks Ave., Asbury Park, N. J.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.

CONTROLS—Frequency

Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Burlington Instrument Co., Burlington, Iowa.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

CONTROLS—Gain See Attenuators

CONTROLS—Heat Treating

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Eagle Signal Corp., Melroe, Ill.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gordon Co., Claud S., 2000 S. Wallace St., Chicago 16, Ill.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Snerman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Tuttle & Kirt, 1823 N. Monitor St., Chicago 39, Ill.
 Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.

CONTROLS—Humidity

American Instrument Co., 3030 Georgia Ave., Silver Spring, Md.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Controls Co., Glendale 1, Calif.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Niagara Electron Laboratories, Andover, N. Y.
 Serdex, Inc., 91 Cambridge St., Boston, Mass.
 Thermo Instruments Co., Box 336, Belmont, Calif.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

CONTROLS—Illumination

Autotron Co., The, Danville, Ill.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
HUCHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Worner Electronic Devices, Rankin, Ill.

CONTROLS—Inspection

Arma Corp., 254 36th St., Brooklyn 32, N. Y.
Autotron Co., The, Danville, Ill.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.

CONTROLS—Liquid Level

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
Bristol Co., The, Waterbury 20, Conn.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 314.
Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
Foxboro Co., The, Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 253.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Mercoird Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Niagara Electron Laboratories, Andover, N. Y.
Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
Thermo Instruments Co., Box 336, Belmont, Calif.
United Electric Controls Co., 85 School St., Watertown 72, Mass.
Vapor Recovery Systems Co., 2820 N. Alameda, Compton, Calif.
Warrick Co., Charles F., 1964 W. Eleven Mile Rd., Berkley, Mich.
Worner Electronic Devices, Rankin, Ill.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

CONTROLS—Loop Regulation

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.

CONTROLS—Machine Safety

Brinnell Company, The, Simsbury, Conn.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
Electrical Service Co., 1271 Mission St., San Francisco, Calif.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Modelectric Products Corp., 1500 Banks Ave., Asbury Park, N. J.
Niagara Electron Laboratories, Andover, N. Y.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

CONTROLS—Materials Thickness

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
Magnaflex Corp., 5900 Northwest Hwy., Chicago 31, Ill.
Niagara Electron Laboratories, Andover, N. Y.
Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.

CONTROLS—Mechanical Overload

Brinnell Company, The, Simsbury, Conn.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Eagle Signal Corp., Moline, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
Mercoird Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.

CONTROLS—Mechanical Switch

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
Bristol Co., The, Waterbury 20, Conn.
Eagle Signal Corp., Moline, Ill.
Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
Stow Mfg. Co., 445 State St., Binghamton, N. Y.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

CONTROLS—Moisture

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bristol Co., The, Waterbury 20, Conn.
Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
Foxboro Co., The, Foxboro, Mass.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Niagara Electron Laboratories, Andover, N. Y.

CONTROLS—Oxygen

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
ECLIPSE-PIONEER DIV., BENDIX AVIATION CO., Teterboro, N. J. ADV. PG. 132, 133.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

CONTROLS—Package Wrapping

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
Fisher-Pierce Co., Inc., 170 Pearl St., South Braintree (Boston 85), Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Worner Electronic Devices, Rankin, Ill.

CONTROLS—pH

Analytical Measurements, Inc., 585 Main St., Chatham, N. J.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
Foxboro Co., The, Foxboro, Mass.
LaMotte Chemical Products Co., Towson 4, Baltimore, Md.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
Process & Instruments, 60 Greenpoint Ave., Brooklyn, N. Y.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

CONTROLS—Photoelectric

Airmec Ltd., High Wycombe, Buckinghamshire, England
Autotron Co., The, Danville, Ill.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. 26, England.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
Electrical Service Co., 1271 Mission St., San Francisco, Calif.
Electrodyne Co., Endicott St., Norwood, Mass.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
Fisher-Pierce Co., Inc., 170 Pearl St., South Braintree (Boston 85), Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
Industrial Electronics Co., Inc., Hanover, Mass.
Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

CONTROLS—Alarm System

Bristol Co., The, Waterbury 20, Conn.
 Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Dondar Devices, P. O. Box 187, La Canada, Calif.
 EDISON INC., THOMAS A., Instrument Div., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 300, 301.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 164-167.
 KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Modelectric Products Corp., 1500 Banks Ave., Asbury Park, N. J.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
 SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York 11, N. Y. ADV. PG. 418.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Worner Electronic Devices, Rankin, Ill.

CONTROLS—Automatic Tuning

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
 STAVER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 353.

CONTROLS—Automatic Voltage Regulating

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Associated Engineering Corp. of Boston, 38 Euston Rd., Brighton 35, Mass.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Burlington Instrument Co., Burlington, Iowa.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
 ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 220.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. ADV. PG. 340.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
 KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.

KEPCO LABS., INC., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 25-27.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 437.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
 SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, Ill. ADV. PG. 536.
 SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 62, 63.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 VICKERS ELECTRIC DIVISION, Vickers, Inc., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 376.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

CONTROLS—Capacitance Operated

AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Niagara Electron Laboratories, Andover, N. Y.
 Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

CONTROLS—Chemical

Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Foxboro Co., The, Foxboro, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
 LaMotte Chemical Products Co., Towson 4, Baltimore, Md.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Niagara Electron Laboratories, Andover, N. Y.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.

CONTROLS—Counting & Sorting

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Autotron Co., The, Danville, Ill.
 BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Brinnell Company, The, Simsbury, Conn.
 Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Counter and Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Eagle Signal Corp., Moline, Ill.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.

R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Worner Electronic Devices, Rankin, Ill.

CONTROLS—Density
 See Controls, Specific Gravity

CONTROLS—Dimension

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 TELETRONICS LABORATORY, INC., Kinkel St., Waterbury, N. Y. ADV. PG. 287.

CONTROLS—Door

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 A. R. F. Products, Inc., 7627 Lake St., River Forest, Ill.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Federal Electric Products Co., 50 Paris St., Newark 1, N. J.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Holtzer-Cabot, Div. of National Pneumatic Co., Inc., 20 Amory St., Boston 19, Mass.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Stanley Works, The, 195 Lake St., New Britain, Conn.

CONTROLS—Electric Motor

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 1, Wis.
 Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Bristol Co., The, Waterbury 20, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Counter and Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Federal Electric Products Co., 50 Paris St., Newark 1, N. J.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gleason-Avery, Inc., Auburn, N. Y.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Northeastern Engineering Inc., Manchester, N. H.
 OPAD-GREEN CO., 71-5 Warren St., New York 1, N. Y. ADV. PG. 479.
 R. B. M. DIVISION ESSEX WIRE CORP., Logansport, Ind. ADV. PG. 261.
 Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
 Spencer Thermostat Div., Metals & Controls Corp., 3 Forest St., Attleboro, Mass.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

ull Electric Dept. of General Electric Co., Plain-
Conn.
LEONARD ELECTRIC CO., 31 South St., Mt.
N. Y. ADV. PG. 317, 318.
INGHOUSE ELECTRIC CORP., P. O. Box 868,
burgh 30, Pa. ADV. PG. 45-55, 60.
outh Instrument Co., 1440 Commercial St., East
ymouth 89, Mass.
n Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.
Electric Co., 152 W. Walton St., Chicago 10, Ill.

Mercoid Corporation, The, 4201 Belmont Ave., Chicago
41, Ill.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial
Div., Wayne & Roberts Aves., Philadelphia 44, Pa.
ADV. PG. 354, 355.
Wheelco Instruments Div., Barber-Colman Co., Rockford,
Ill.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6,
Mo.

Filtors, Inc., Electroquipt Controls Div., 30 Sagamore
Hill Drive, Port Washington, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Haledy Electronics Co., 57 William St., New York 5,
N. Y.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver
10, Colo.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8,
Calif.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
International Research Associates, 2221 Warwick Ave.,
Santa Monica, Calif.
KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill.
ADV. PG. 550.
NORRMAN LABORATORIES, ERNST, Williams Bay, Wis.
ADV. PG. 620.
Northeastern Engineering Inc., Manchester, N. H.
Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great
Neck, N. Y.
Regulator Equipment Corp., 56 California Ave., Pater-
son 3, N. J.
Robinette Co., W. C., 802 Fair Oaks Ave., South
Pasadena, Calif.
Tech-Master Products Co., 443-5 Broadway, New York
13, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
ADV. PG. 562.

CONTROLS—Electronic Motor

ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Hart & Hegeman Electric Co., 103 Hawthorn St.,
Stford 6, Conn.
Electric Mfg. Co., 52 Iowa Ave., Paterson 3,
N. J.
Controller Co., The, 1146 E. 152nd St., Cleveland
Ohio.
Instrument Co., 1320 S. Grand Ave., Dept. A, Los
Angeles 15, Calif.
Hammer, Inc., 411 N. 12th St., Milwaukee 1,
Wis.
ECLIPSE-PIONEER DIV. BENDIX AVIATION CORP.,
Teterboro, N. J. ADV. PG. 132, 133.
Electric Machinery Mfg. Co., 1331 N. E. Tyler St.,
Minneapolis 13, Minn.
Electronic Control Corp., 1573 E. Forest St., Detroit,
Mich.
Elec Laboratories, Inc., 380 Hillside Ave., Hillside,
Ill.

CONTROLS—Fluid Conductivity

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Foxboro Co., The, Foxboro, Mass.
Industrial Instruments, Inc., 89 Commerce Rd., Cedar
Grove, N. J.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30,
Pa.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,
Ill.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New
York 55, N. Y. Adv. PG. 437.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial
Div., Wayne & Roberts Aves., Philadelphia 44, Pa.
ADV. PG. 354, 355.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W.C. 2, England.
Niagara Electron Laboratories, Andover, N. Y.
Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
bridge 39, Mass. ADV. PG. 90, 91.
Hm Mfg. Co., 2961 E. Colorado St., Pasadena 8,
Ill.

CONTROLS—Fluid Flow

Askania Regulator Co., 240 E. Ontario St., Chicago 11,
Ill.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Bar-Ray Products, Inc., 209 25th St., Brooklyn 32,
N. Y.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV.
PG. 137.
Bristol Co., The, Waterbury 20, Conn.
Control Engineering Corp., 560 Providence Highway,
Norwood, Mass.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,
Wis.

ational Research Associates, 2221 Warwick Ave.,
anta Monica, Calif.
O Research & Development Corp., 315 S. 15th St.,
Philadelphia 2, Pa.
ALEX CORPORATION OF AMERICA, Clifton Blvd.,
Clifton, N. J. ADV. PG. 292, 293.
Eastern Engineering Inc., Manchester, N. H.
INDUSTRIAL CONTROL CO., Straight Path & Arlington
Rd., Wyandanch, N. Y. ADV. PG. 599.

THEON MFG. CO., Equipment Sales Div., Waltham
Mass. ADV. PG. 420.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasa-
dena, Calif.
Smy Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
VO CORP. OF AMERICA, 20-20 Jericho Turnpike,
New Hyde Park, N. Y. ADV. PG. 438, 439.
Speed Div. of Electro Devices, Inc., 4 Godwin Ave.,
Paterson, N. J.
Tek Products Co., Inc., 1086 Goffe Rd., Haw-
thorne, N. J.
Cicer Thermostat Div., Metals & Controls Corp., 34
Forest St., Attleboro, Mass.
Zonic Co., 19500 W. Eight Mile Rd., Detroit 19,
Mich.

THEON MFG. CO., Equipment Sales Div., Waltham
Mass. ADV. PG. 420.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasa-
dena, Calif.
Smy Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
VO CORP. OF AMERICA, 20-20 Jericho Turnpike,
New Hyde Park, N. Y. ADV. PG. 438, 439.
Speed Div. of Electro Devices, Inc., 4 Godwin Ave.,
Paterson, N. J.
Tek Products Co., Inc., 1086 Goffe Rd., Haw-
thorne, N. J.
Cicer Thermostat Div., Metals & Controls Corp., 34
Forest St., Attleboro, Mass.
Zonic Co., 19500 W. Eight Mile Rd., Detroit 19,
Mich.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16,
Ill.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia
30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial
Div., Wayne & Roberts Aves., Philadelphia 44, Pa.
ADV. PG. 354, 355.
Sherman Industrial Electronics Co., Inc., 505 Washing-
ton Ave., Belleville 9, N. J.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W.C. 2, England.
Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
Wheelco Instruments Div., Barber-Colman Co., Rockford,
Ill.

MAXSON CORP., W. L., 460 W. 34th St., New York 1,
N. Y. ADV. PG. 144.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial
Div., Wayne & Roberts Aves., Philadelphia 44, Pa.
ADV. PG. 354, 355.
Modelectric Products Corp., 1500 Banks Ave., Asbury
Park, N. J.
Niagara Electron Laboratories, Andover, N. Y.
Precision Scientific Co., 3737 W. Cortland St., Chicago
47, Ill.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasa-
dena, Calif.
ROTRON MFG. CO., INC., 7-9 Schoonmaker Lane,
Woodstock, N. Y. ADV. PG. 136.
TRANS-SONICS, INC., Bedford Airport, Bedford, Mass.
ADV. PG. 604.

CONTROLS—Elevator Leveling

Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

CONTROLS—Food Processing

Askania Regulator Co., 240 E. Ontario St., Chicago 11,
Ill.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Cinema-Television Ltd., Worsley Bridge Rd., London, S.E.
26, England.
Foxboro Co., The, Foxboro, Mass.
Haledy Electronics Co., 57 William St., New York 5,
N. Y.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial
Div., Wayne & Roberts Aves., Philadelphia 44, Pa.
ADV. PG. 354, 355.
Modelectric Products Corp., 1500 Banks Ave., Asbury
Park, N. J.
Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.

CONTROLS—Film Thickness

Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
ANSON INSTRUMENTS, INC., 438 Fairfield Ave.,
Stamford, Conn. ADV. PG. 502.
TECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26,
Ill. ADV. PG. 609.
Electric Eye Equipment Co., 16 W. Fairchild St., Dan-
ville, Ill.
Electronic Control Corp., 1573 E. Forest St., Detroit,
Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver
10, Colo.
Niagara Electron Laboratories, Andover, N. Y.
Radioactive Products, Inc., 443 W. Congress St., De-
troit 26, Mich.
Standard Electronics Research Corp., 2 East End Ave.,
New York 21, N. Y.
Cutlerlab, Inc., 130 High St., Boston 10, Mass.

CONTROLS—Flame Failure

Bristol Co., The, Waterbury 20, Conn.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta
Place, Chicago 14, Ill.
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago
51, Ill.
Specialty Corp., 96 S. Washington Ave., Bergenfield,
N. J.
General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave.,
Bloomfield, N. J. ADV. PG. 251.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5,
Ill.

CONTROLS—Frequency

Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
Darby, Pa. ADV. PG. 239.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV.
PG. 137.
Burlington Instrument Co., Burlington, Iowa.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,
Wis.

CONTROLS—Gain

See Attenuators

CONTROLS—Heat Treating

Askania Regulator Co., 240 E. Ontario St., Chicago 11,
Ill.
Assembly Products, Inc., Chagrin Falls 6, Ohio.
Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Eagle Signal Corp., Moline, Ill.
Electronic Control Corp., 1573 E. Forest St., Detroit,
Mich.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16,
Ill.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia
30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial
Div., Wayne & Roberts Aves., Philadelphia 44, Pa.
ADV. PG. 354, 355.
Sherman Industrial Electronics Co., Inc., 505 Washing-
ton Ave., Belleville 9, N. J.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W.C. 2, England.
Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
Wheelco Instruments Div., Barber-Colman Co., Rockford,
Ill.

CONTROLS—Humidity

American Instrument Co., 8030 Georgia Ave., Silver
Spring, Md.
Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.
Bristol Co., The, Waterbury 20, Conn.
Fischer & Porter Co., 476 Warminster Road, Hatboro,
Pa.
Foxboro Co., The, Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore
4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
General Controls Co., Glendale 1, Calif.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30,
Pa.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.
S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial
Div., Wayne & Roberts Aves., Philadelphia 44, Pa.
ADV. PG. 354, 355.
Niagara Electron Laboratories, Andover, N. Y.
Serdex, Inc., 91 Cambridge St., Boston, Mass.
Thermo Instruments Co., Box 336, Belmont, Calif.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

CONTROLS—Illumination

Autotron Co., The, Danville, Ill.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place,
Chicago 14, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
bridge 39, Mass. ADV. PG. 90, 91.
Haledy Electronics Co., 57 William St., New York 5,
N. Y.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif.
ADV. PG. 254.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W.C. 2, England.
WESTON ELECTRICAL INSTRUMENTS CORP., 614
Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
Worner Electronic Devices, Rankin, Ill.

CONTROLS—Inspection

Arma Corp., 254 36th St., Brooklyn 32, N. Y.
 Autotron Co., The, Danville, Ill.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gerrett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.

CONTROLS—Liquid Level

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bristol Co., The, Waterbury 20, Conn.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 314.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 253.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 Mercoid Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Niagara Electron Laboratories, Andover, N. Y.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
 Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
 Servo-Tek Products Co., Inc., 1086 Goffle Rd., Hawthorne, N. J.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Sterlina Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 Thermo Instruments Co., Box 336, Belmont, Calif.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.
 Vapor Recovery Systems Co., 2820 N. Alameda, Compton, Calif.
 Warrick Co., Charles F., 1964 W. Eleven Mile Rd., Berkeley, Mich.
 Worner Electronic Devices, Rankin, Ill.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

CONTROLS—Loop Regulation

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.

CONTROLS—Machine Safety

Brinnell Company, The, Simsbury, Conn.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gerrett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Modelectric Products Corp., 1500 Banks Ave., Asbury Park, N. J.
 Niagara Electron Laboratories, Andover, N. Y.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

CONTROLS—Materials Thickness

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gerrett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Magnaflex Corp., 5900 Northwest Hwy., Chicago 31, Ill.
 Niagara Electron Laboratories, Andover, N. Y.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.

CONTROLS—Mechanical Overload

Brinnell Company, The, Simsbury, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Eagle Signal Corp., Moline, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Mercoid Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.

CONTROLS—Mechanical Switch

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Bristol Co., The, Waterbury 20, Conn.
 Eagle Signal Corp., Moline, Ill.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
 Stow Mfg. Co., 445 State St., Binghamton, N. Y.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

CONTROLS—Moisture

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Niagara Electron Laboratories, Andover, N. Y.

CONTROLS—Oxygen

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
ECLIPSE-PIONEER DIV., BENDIX AVIATION CO., Teterboro, N. J. ADV. PG. 132, 133.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

CONTROLS—Package Wrapping

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Fisher-Pierce Co., Inc., 170 Pearl St., South Braintree (Boston 85), Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Worner Electronic Devices, Rankin, Ill.

CONTROLS—pH

Analytical Measurements, Inc., 585 Main St., Chatham, N. J.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Foxboro Co., The, Foxboro, Mass.
 LaMotte Chemical Products Co., Towson 4, Baltimore, Md.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 2, N. Y.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

CONTROLS—Photoelectric

Airmec Ltd., High Wycombe, Buckinghamshire, England
 Autotron Co., The, Danville, Ill.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. 26, England.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Electronic Control Corp., 1573 E. Forest St., Detroit 26, Mich.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
 Fisher-Pierce Co., Inc., 170 Pearl St., South Braintree (Boston 85), Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
 Industrial Electronics Co., Inc., Hanover, Mass.
 Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
Unitronics, Inc., 472 Paul Ave., Ferguson Station, St. Louis 21, Mo.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
Worner Electronic Devices, Rankin, Ill.

CONTROLS—Photographic Exposure

Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.
Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Hycan Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
Telesvis Corp., 7466 W. Irving Park Road, Chicago 34, Ill.
Unitronics, Inc., 472 Paul Ave., Ferguson Station, St. Louis 21, Mo.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

CONTROLS—Positioning

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Barber-Colman Co., Rockford, Ill.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BOURNS LABORATORIES, 6136 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
Bristol Co., The Waterbury 20, Conn.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
FORD INSTRUMENT DIV., THE SPERRY CORP., 31-10 Thomson Ave., Long Island City, N. Y. ADV. PG. 582.
General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Glanni & Co., Inc., G. M., Bin N, Pasadena, Calif.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 437.
Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
Niagara Electron Laboratories, Andover, N. Y.
Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, Ill.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
Rust Industrial Co., 608 Willow St., Manchester, N. H.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
Servo-Tek Products Co., Inc., 1086 Goffle Rd., Hawthorne, N. J.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
Synchro Start Products, Inc., 8151 N. Ridgeway Ave., Skokie, Ill.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
Telesvis Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

CONTROLS—Power Level

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
Bristol Co., The Waterbury 20, Conn.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.

CONTROLS—Pressure

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
BOURNS LABORATORIES, 6136 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
Bristol Co., The Waterbury 20, Conn.
Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Fischer & Porter Co., 476 Warminter Road, Hatboro, Pa.
Foxboro Co., The Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
Fulton Siphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.
General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Hastings Instrument Co., Inc., Hampton 9, Va.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Mercoid Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Niagara Electron Laboratories, Andover, N. Y.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
United Electric Controls Co., 85 School St., Watertown 72, Mass.
Wallace & Tiernan Co., Inc., Belleville 9, N. J.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.

CONTROLS—Printing

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Haledy Electronics Co., 57 William St., New York 5, N. Y.

CONTROLS—Radio Remote

A. R. F. Products, Inc., 7627 Lake St., River Forest, Ill.
Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
American Electronreering Corp., 2040 Colorado Ave., Santa Monica, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.
Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
Gates Radio Co., Quincy, Ill.
HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 164-167.
Hastings Instrument Co., Inc., Hampton 9, Va.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.
Motorola Inc., 4545 Augusta Blvd., Chicago 51, Ill.
Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
Shields' Laboratories, Inc., 810 N. Lincoln Ave., Pittsburgh 12, Pa.
Spar Engineering & Development Inc., S & Paxson Aves., Wyncote, Pa.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Stow Mfg. Co., 445 State St., Binghamton, N. Y.
Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
Telesvis Corp., 7466 W. Irving Park Road, Chicago 34, Ill.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.
Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.

CONTROLS—Register

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
Electrodyne Co., Endicott St., Norwood, Mass.
Electronic Control Corp., 1573 E. Forest St., Detroit 10, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.

CONTROLS—Register Cutter

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
Electrodyne Co., Endicott St., Norwood, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.

CONTROLS—Servo

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Arma Corp., 254 36th St., Brooklyn 32, N. Y.
Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
DALMO VICTOR CO., 1414 El Camino Real, San Carlos, Calif. ADV. PG. 191.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
ECLIPSE-PIONEER DIV. BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
FORD INSTRUMENT DIV., The Sperry Corp., 31-10 Thomson Ave., Long Island City, N. Y. ADV. PG. 582.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
Hycan Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
L & O Research & Development Corp., 315 S. 15th St., Philadelphia 2, Pa.

MAGNAVOX CO., THE Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Magnetic Devices, Inc., 712 East St., Frederick, Md.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
OSTER MFG. CO., JOHN, 1 Main St., Racine, Wis. ADV. PG. 494.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 614.
 Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 426.
 Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
 Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
 Spar Engineering & Development Inc., S & Paxson Aves., Wyncote, Pa.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Ill.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
TRANSICOIL CORP., 107 Grand St., New York 13, N. Y. ADV. PG. 461.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

CONTROLS—Smoke & Combustion, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.
 Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
 Worner Electronic Devices, Rankin, Ill.

CONTROLS—Sound System

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
 North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 160.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.

CONTROLS—Specific Gravity

Bristol Co., The, Waterbury 20, Conn.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.

Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

CONTROLS—Strain

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 4, Wis.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

CONTROLS—Temperature, Electronic

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Barber-Colman Co., Rockford, Ill.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Bristol Co., The, Waterbury 20, Conn.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago 37, Ill.
 Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
KALBFELL LABS, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 L & O Research & Development Corp., 315 S. 15th St., Philadelphia 12, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Macdonald Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 Mercoid Corporation The, 4201 Belmont Ave., Chicago 41, Ill.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Nlagara Electron Laboratories, Andover, N. Y.
 Northeastern Engineering Inc., Manchester, N. H.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
STEVENS MFG. CO., INC., 69 S. Walnut St., Mansfield, Ohio. ADV. PG. 314.
 Taco West Corp., 525 N. Noble St., Chicago 22, Ill.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Freinhuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
 White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.

CONTROLS—Tentering

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

CONTROLS—Timing

ADAMS & WESTLAKE CO., Michigan St., Elkhart, Ind. ADV. PG. 103-106.
 Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Autotron Co., The, Danville, Ill.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Merion, Pa. ADV. PG. 239.
 Bristol Co., The, Waterbury 20, Conn.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cinema-Television Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Coral Designs Div., Henry G. Dietz Co., 12-16 Astor Blvd., Long Island City 2, N. Y.
 Counter & Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 Durakool, Inc., 1010 N. Main St., Elkhart, Ind.
 Eagle Signal Corp., Moline, Ill.
ECLIPSE-PIONEER DIV. BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
EDISON INC., THOMAS A., Instrument Div., 81 Lake side Ave., West Orange, N. J. ADV. PG. 300, 301.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 314.
 Foxboro Co., The, Foxboro, Mass.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
 Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
 Gorrell & Gorrell, Haworth, N. J.
G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. ADV. PG. 340.
 Haledy Electronics Co., 57 William St., New York 58, N. Y.
HAYDON CO., A. W., The, 232 N. Elm St., Waterbury 20, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. ADV. PG. 208, 209.
 Ingraham Co., E., Bristol, Conn.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 51, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
NORRMAN LABORATORIES, ERNST, Williams Bay, Wis. ADV. PG. 620.
 Paragon Electric Co., Two Rivers, Wis.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
 Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
 Robotron Corp., 21300A W. Eight Mile Rd., P. O. Box 4885, Detroit 19, Mich.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
SESSIONS CLOCK CO., Forestville, Conn. ADV. PG. 459.
 Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
STAVER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 353.
 Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Weltlich Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
 Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

CONTROLS—Torque, Electronic

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.

Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
ECLIPSE-PIONEER DIV. BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Foxboro Co., The, Foxboro, Mass.
 Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Ingraham Co., E., Bristol, Conn.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 376.

CONTROLS—Turbidity

Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.

CONTROLS—Ultrasonic

Piezo Products Co., Whitney St., Framingham, Mass.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
 Televiso Corp., 7466 W. Irving Park Road, Chicago 34, Ill.
 Vendo Co., 7400 E. 12th St., Kansas City 8, Mo.

CONTROLS—Vacuum

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
 Bristol Co., The, Waterbury 20, Conn.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
 Continental Electric Co., Geneva, Ill.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Manning Maxwell & Moore, Inc., Stratford, Conn.
 Mercoid Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
 Niagara Electron Laboratories, Andover, N. Y.
 Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.

CONTROLS—Ventilating Control System

Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Barber-Colman Co., Rockford, Ill.
 Bristol Co., The, Waterbury 20, Conn.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Foxboro Co., The, Foxboro, Mass.
 Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gleason-Avery, Inc., Auburn, N. Y.
 Mercoid Corporation, The, 4201 Belmont Ave., Chicago, Ill.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S. Minneapolis, Minn.
ROTRON MFG. CO., INC., 7-9 Schoonmaker Lane, Woodstock, N. Y. ADV. PG. 136.

CONTROLS—Weight

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354-355.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.

CONTROLS—Welding

Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 314.
 Federal Tool Engineering, Inc., 1386 Pompton Ave., Cedar Grove, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 92.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Robotron Corp., 21300A W. Eight Mile Rd., P. O. Box 4885, Detroit 19, Mich.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Weltron Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

CONVERTERS

1. AC-DC
2. Computing
3. DC-AC
4. F-M
5. Frequency
6. Frequency Shift
7. High Frequency
8. Low Frequency
9. Magnetic
10. Microwave
11. Rotary
12. Static, Electronic
13. Television
14. Vibrator Type
15. Voltage
16. Waveform

Acme Telectronix Div., NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio. 5.
AIR ASSOCIATES, INC., Teterboro, N. J. 6-7. ADV. PG. 329.
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-3-9-14-15. ADV. PG. 119.
AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. 10. ADV. PG. 534.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. 2. ADV. PG. 204, 205.
 American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif. 5-7.

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif. 1-15.
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass. 2.
AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. 1-3-14-15. ADV. PG. 278.
 Amglo Corp., 2037 W. Division St., Chicago 22, Ill. 14.
 Astatic Corporation, The, Conneaut, Ohio. 13.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y. 2.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J. 1-3-12-15.
 Barber Labs., Alfred W., 32-44 Francis Lewis Blvd., Flushing, N. Y. 6.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 5-6. ADV. PG. 239.
 Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J. 13.
 Bludworth Marine Div., National Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. 3.
 Boehme, Inc., H. O., 915 Broadway, New York 10, N. Y. 6.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 1-3-7-8-11-15.
 Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 1-3-7-8-11-15.
BOONTON RADIO CORP., Boonton, N. J. 5-7-8. ADV. PG. 187.
 Bristol Co., The, Waterbury 20, Conn. 3-5-7-8-14.
 Camburn, Inc., 32-40 57th St., Woodside, N. Y. 3-4-6.
CARTER MOTOR CO., 2644 N. Maplewood Ave., Chicago 47, Ill. 3-11. ADV. PG. 506.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. 10. ADV. PG. 573.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. 7. ADV. PG. 467.
COLLINS RADIO CO., Cedar Rapids, Iowa 6. ADV. PG. 82, 83.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. 5. ADV. PG. 454, 455.
CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. 1-3-5-11. ADV. PG. 569.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J. 1-3-13-14-15.
 Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J. 2.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. 10.
 DuMont Laboratories, Inc., Allen B., Television Receiver Div., 35 Market St., East Paterson, N. J. 13.
ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. 3. ADV. PG. 132, 133.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. 3-11. ADV. PG. 120.
 Electric Specialty Co., 300 South St., Stamford, Conn. 1-3-11.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. 1-3-11. ADV. PG. 592.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. 1. ADV. PG. 288.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. 2. ADV. PG. 157.
 Electronic Measurements Co., Inc., Lewis St. & Maple Ave., Eatontown, N. J. 12.
 Electronic Processes Corp., 1021 San Antonio Road, Los Altos, Calif. 7.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn. 2.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y. 6.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 14. ADV. PG. 148-153.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. 5. ADV. PG. 575.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-3-5-7-8-11. ADV. PG. 1-18.
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. 13. ADV. PG. 291.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. 2-3-9. ADV. PG. 119.
 Georator Corp., Box 463, Manassas, Va. 1-3-5-7-8.
 Gosset Co., 801 S. Main St., Burbank, Calif. 4-7.
 Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill. 3.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y. 5-13.
 Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill. 11.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio. 11.
 I.D.E.A., 7900 Pendleton Pike, Indianapolis 26, Ind. 13.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. 1-7.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif. 13.
 Janette Mfg. Co., 555 W. Monroe St., Chicago 6, Ill. 11.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa. 6-13.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. Y. 1.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. 2. ADV. PG. 365.
 Kato Engineering Co., 1415 First Ave., Mankato, Minn. 3-5-11.

Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass. 10.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif. 1.
 Leland Electric Co., The, Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio. 1-3-11.
 Lesa, Via Bergamo 21, Milan, Italy. 1-3-11.
 Little, Inc., Arthur D., Cambridge, Mass. 2.
 Lysof Mfg. Co., 82 Herman St., East Rutherford, N. J. 7.
 McCoolpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif. 1.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. 9. ADV. PG. 437.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif. 9.
 Mallory & Co., Inc., P. R. 3029 E. Washington St., Indianapolis 6, Ind. 1-13.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. 4.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. 1-3-12-15. ADV. PG. 127.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. 10. ADV. PG. 110.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. 3-9-14. ADV. PG. 354, 355.
MODEL RECTIFIER CORP., 557 Rogers Ave., Brooklyn 25, N. Y. 2. ADV. PG. 536.
NORMAN LABORATORIES, ERNST, Williams Bay, Wis. 5. ADV. PG. 620.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio. 3-8-14.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. 6. ADV. PG. 196-198.
 Nucleonic Company of America, 497 Union St., Brooklyn 31, N. Y. 12.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill. 14.
OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. 1. ADV. PG. 479.
PERKIN ENGINEERING CORP., 345 Kansas St., El Segundo, Calif. 1. ADV. PG. 604.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. 10. ADV. PG. 122, 123.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y. 2.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. 14-15. ADV. PG. 502.
 Radiart Corp., 3455 Vega Ave., Cleveland 13, Ohio. 1-3-14.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. 5-10. ADV. PG. 295, Inside Back & Back Covers.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. 6. ADV. PG. 512.
 Radio Mfg. Engineers, Inc., 300-302 First Ave., Peoria 6, Ill. 5-7-13.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. 13. ADV. PG. 434, 435.
RAPID ELECTRIC CO., 2881 Middletown Rd., New York, N. Y. 1. ADV. PG. 628.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. 1-5. ADV. PG. 420.
 Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio. 5.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill. 1-12-15.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. 13.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 1-3-5-12. ADV. PG. 62, 63.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. 10. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 11.
 Tallier & Cooper Co., 75 Front St., Brooklyn 1, N. Y. 2.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y. 13.
 Technical Material Corp., P. O. Box 142, Mamaroneck, N. Y. 6-8.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn. 10.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. 7. ADV. PG. 562.
TERADO CO., 1068 Raymond Ave., St. Paul 14, Minn. 3-14. ADV. PG. 293, 332.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. 6. ADV. PG. 384.
TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. 10. ADV. PG. 427.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y. 13.
TURNER CO., THE, 909 17th St., N.E., Cedar Rapids, Iowa. 13. ADV. PG. 312.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. 9. ADV. PG. Inside Front Cover.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas. 1-3-12.
VECTRON, INC., 404 Main St., Waltham 54, Mass. 10. ADV. PG. 457.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich. 14.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass. 2-5-8.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. 5. ADV. PG. 596.
WAVELINE, INC., Box 470, Caldwell, N. J. 10. ADV. PG. 628.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill. 1.
 Wheeler Laboratories, Inc., Great Neck, N. Y. 10.

Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J. 1-3-4-14.
 Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa. 1-3-11-15.
 Yonkers Industries, 28 School St., Yonkers, N. Y. 13.

COOKERS—Electronic

RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.

CORD SETS

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 American Radio Hardware Co., Inc., 152 MacQuestion Pkwy., Mt. Vernon, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 B & M Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Cable Electric Products Co., Providence, R. I.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Dyna Labs, Inc., 1075 Stewart Ave., Garden City, N. Y.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 Koiled Kords, Inc., Box K, New Haven 14, Conn.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
 Modelectric Products Corp., 1500 Bangs Ave., Asbury Park, N. J.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 228, 302.
 Rofoan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Sheldon Electric Co., Div. of Allied Electric Products Inc., 76 Coit St., Irvington 11, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TRIMM, INC., 400 W. Lake St., Libertyville, N. Y. ADV. PG. 600.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

CORDS—Dial Cords & Cables

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
GUDEBROD BROS. SILK CO., INC., Electronics Div., 225 W. 34th St., New York 1, N. Y. ADV. PG. 572.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Koiled Kords, Inc., Box K, New Haven 14, Conn.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W. C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.

U. S. Wire & Cable Corp., Progress & Monroe Union, N. J.
WHITNEY BLAKE CO., New Haven 14, Conn. PG. 456.

CORDS—Lacing

ALDEN PRODUCTS CO., 112 N. Main St., Brockton Mass. ADV. PG. 204, 205.
 Atlantic & Pacific Wire & Cable Co., Inc., 112 Northern Blvd., Corona, N. Y.
 Columbian Rope Co., Auburn, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
GUDEBROD BROS. SILK CO., INC., Electronics 225 W. 34th St., New York 1, N. Y. ADV. PG. 572.
HEMINWAY & BARTLETT MFG. CO., 500 Fifth St., New York 36, N. Y. ADV. PG. 560.
MITCHELL RAND INSULATION CO., INC., 51 Montrose St., New York 7, N. Y. ADV. PG. 222.
 Owens-Corning Fiberglas Corp., 16 E. 56th St., New York 22, N. Y.
 Resin Industries, Santa Barbara, Calif.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.

CORDS—Line

ALDEN PRODUCTS CO., 112 N. Main St., Brockton Mass. ADV. PG. 204, 205.
 Atlantic & Pacific Wire & Cable Co., Inc., 112 Northern Blvd., Corona, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581
BRAND & CO., INC., WILLIAM, North & Valley St., Willimantic, Conn. ADV. PG. 308, 309.
 Cable Electric Products Co., Providence, R. I.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Custom Electronics Corp., Morris Plains, N. J.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Koiled Kords, Inc., Box K, New Haven 14, Conn.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
 Modelectric Products Corp., 1500 Bangs Ave., Asbury Park, N. J.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. Y.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
PHALO PLASTICS CORP., 25 Foster St., Worcester Mass. ADV. PG. 310.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Union, N. J.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.
 Wurflitzer Co., Rudolph, North Tonawanda, N. Y.

CORDS—Line Resistance

Atlantic & Pacific Wire & Cable Co., Inc., 112 Northern Blvd., Corona, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Holyoke Wire & Cable Co., Holyoke, Mass.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 U. S. Wire & Cable Corp., Progress & Monroe Union, N. J.

CORDS—Patch

ALDEN PRODUCTS CO., 112 N. Main St., Brockton Mass. ADV. PG. 204, 205.
 Atlantic & Pacific Wire & Cable Co., Inc., 112 Northern Blvd., Corona, N. Y.
 Audio Equipment Sales, 153 W. 33rd St., New York 1, N. Y.
BUGGIE & CO., H. H., 726 Stanton St., Toledo, Ohio. ADV. PG. 422.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Gates Radio Co., Quincy, Ill.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Spar Engineering & Development Inc., S & Paxson Aves., Wyncote, Pa.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe St., Union, N. J.

CORES—"C" Type

ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 180-186.
 CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
 MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 591.
 Moloney Electric Co., 5590 Bircher Blvd., St. Louis 20, Mo.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 PYROFERRIC CO., INC., 621 E. 216th, New York 67, N. Y. ADV. PG. 316.
 THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 254.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

CORES—Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 CENTRAL DIV. OF GLOBE UNION INC., 914Y E. Keefe Ave., Milwaukee, Wis. ADV. PG. 21-24.
 CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
 Ferricore Inc., 15 School St., Yonkers 2, N. Y.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Insulantite Mfg. Corp., Stirling, N. J.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 19, N. Y. ADV. PG. 466.
 APP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
 MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 591.
 Powdered Metal Products Corp., Franklin Park, Ill.
 Saxonburg Ceramics, Saxonburg, Pa.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wisconsin Porcelain Co., Sun Prairie, Wis.

CORES—Ferrite

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Ferricore Inc., 15 School St., Yonkers 2, N. Y.
 Ferrocube Corp. of America, 1000 E. Bridge St., Saugerties, N. Y.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.
 MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 591.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 362, 363.
 Powdered Metal Products Corp., Franklin Park, Ill.
 Speer Resistor Division, Speer Carbon Co., St. Marys, Pa.
 STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

CORES—High Permeability Magnetic

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 180-186.
 CROWLEY CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Ferricore Inc., 15 School St., Yonkers 2, N. Y.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 591.

Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.
 MAGNETICS, INC., Box 230-A, Butler, Pa. ADV. PG. 561.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 362, 363.
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 Powdered Metal Products Corp., Franklin Park, Ill.
 PYROFERRIC CO., INC., 621 E. 216th St., New York 67, N. Y. ADV. PG. 316.
 RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 136.
 Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
 THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 254.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

CORES—Iron

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
 MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 591.
 NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 362, 363.
 Powdered Metal Products Corp., Franklin Park, Ill.
 PYROFERRIC CO., INC., 621 E. 216th St., New York 67, N. Y. ADV. PG. 316.
 RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 136.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

CORES—Powdered Iron

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
 Laboratoire Industriel de Physique Applique, 67 Rue M.A.-Colombier, Bagnolet (Seine), France.
 LENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. ADV. PG. 540.
 MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 591.
 Melpar, Inc., 452 Swann Ave., Alexandria, Va.
 NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 362, 363.
 Powdered Metal Products Corp., Franklin Park, Ill.
 PYROFERRIC CO., INC., 621 E. 216th St., New York 67, N. Y. ADV. PG. 316.
 Quality Components, Inc., St. Marys, Pa.
 RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 136.
 Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
 Speer Resistor Division, Speer Carbon Co., St. Marys, Pa.
 STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

CORES—Slug Tuning Units

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.
 Powdered Metal Products Corp., Franklin Park, Ill.
 PYROFERRIC CO., INC., 621 E. 216th St., New York 67, N. Y. ADV. PG. 316.
 Quality Components, Inc., St. Marys, Pa.
 RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 136.
 Speer Resistor Division, Speer Carbon Co., St. Marys, Pa.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

CORES—Tape Wound

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 180-186.
 MAGNETICS, INC., P. O. Box 230-E, Butler, Pa. ADV. PG. 561.

Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 254.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

CORES—Toroidal

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 180-186.
 CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 LENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. ADV. PG. 540.
 MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 591.
 MAGNETICS, INC., P. O. Box 230-E, Butler, Pa. ADV. PG. 561.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 362, 363.
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 PYROFERRIC CO., INC., 621 E. 216th New York 67, N. Y. ADV. PG. 316.
 RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 136.
 Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
 STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
 THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 254.
 TOROCOIL CO., 1374 Mobile Court, St. Louis, Mo. ADV. PG. 436.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

CORTICAL STIMULATORS

Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

COUNTERS, ELECTRON AND NUCLEAR

See Counters, Geiger

COUNTERS—Electronic

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
 BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.
 Boesch Mfg. Co., Danbury, Conn.
 BURROUGHS CORP., Electronic Instruments Div., 511 N. Broad St., Philadelphia 23, Pa. ADV. PG. 211-214.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Clary Multiplier Corp., San Gabriel, Calif.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.
 Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Detectron Co., 5631 Cahuenga Blvd., North Hollywood, Calif.
 Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.
 Electronic Control Corp., 1573 E. Forest Ave., Detroit, Mich.
 EL-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Gates Radio Co., Quincy, Ill.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
 Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.
 Gorrell & Gorrell, Hawthorn, N. J.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Hetherington, Inc., Sharon Hill, Pa.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Industrial Electronics Co., Inc., Hanover, Mass.
 LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
 Little, Inc., Arthur D., Cambridge, Mass.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 May Co., Donald M., 6055 Lankershim Blvd., North Hollywood, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
 Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
 Nucleonic Company of America, 497 Union St., Brooklyn 31, N. Y.
 Pantek Co., Box 16945, West Branch, Los Angeles 46, Calif.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Technical Associates, 140 W. Providencia Ave., Burbank, Calif.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.
 Unitronics, Inc., 472 Paul Ave., Ferguson Station, St. Louis 21, Mo.
 Utting Associates, George, 290 Centre St., Newton 58, Mass.
 WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

COUNTERS—Frequency

American Electronering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

COUNTERS—Geiger

AMPEREX ELECTRONICS CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
 ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 282.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Detectron Co., 5631 Cahuenga Blvd., North Hollywood, Calif.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.

Georator Corp., Box 463, Manassas, Va.
 Leighton Labs., H. W., 26 Herman St., Glen Ridge, N. J.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Menlo Research Laboratory, Menlo Park, Calif.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 New London Instrument Co., P. O. Box 189, New London, Conn.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Nuclear Development Lab., Box 7034, Kansas City, Mo.
 Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
 Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Nucleonic Company of America, 497 Union St., Brooklyn 31, N. Y.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Precision Radiation Instruments, Inc., 2235 S. LaBrea Ave., Los Angeles 16, Calif.
 R-C Scientific Instrument Co., 307 Culver Blvd., Playa del Rey, Calif.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
 Technical Associates, 140 W. Providencia Ave., Burbank, Calif.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.
 Twentieth Century Electronics, Ltd., Centronics Works, King Henrys Drive, New Addington, Surrey, England.
 Vacuum Tube Products, 506 S. Cleveland St., Ocean-side, Calif.
 VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.
 Welch Allyn, Inc., Skaneateles Falls, N. Y.
 Wood Counter Laboratory, N., 5491 Blackstone, Chicago 37, Ill.

COUNTERS—Mechanical

Acromark Company, The, 9-13 Morrell St., Elizabeth 4, N. J.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Counter and Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.
 Gorrell & Gorrell, Haworth, N. J.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 KEARFOTT CO., INC., 150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
 LANDIS & GYR, INC., 45 W. 45th St., New York 36, N. Y. ADV. PG. 510.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
 Veeder-Root, Inc., Hartford 2, Conn.

COUNTERS—Photoelectric

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Autotron Co., The, Danville, Ill.
 BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Cinema-Television Ltd., Worsley Bridge Rd., London S. E. 26, England.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics Co., Inc., Hanover, Mass.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
 Photobell Company, 116 Nassau St., New York 7, N. Y.

Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 RIPLEY CO., INC., Middletown, Conn. ADV. PG. 6
 Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
 Special Products Co., Silver Spring, Md.
 Unitronics, Inc., 472 Paul Ave., Ferguson Station, Louis 21, Mo.

COUNTERS—Proportional

ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 282.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Twentieth Century Electronics, Ltd., Centronics Works, King Henrys Drive, New Addington, Surrey, England.
 VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.
 Wood Counter Laboratory, N., 5491 Blackstone, Chicago 37, Ill.

COUNTERS—Revolution

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.
 Counter and Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
 Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.
 Gorrell & Gorrell, Haworth, N. J.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.
 STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 410.
 STITCH CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
 Veeder-Root, Inc., Hartford 2, Conn.
 WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.

COUNTING AND SORTING

See Controls, Counting & Sorting

COUPLERS—Directional

COUPLINGS—Microwave

See MICROWAVE ACCESSORIES

COUPLINGS, SHAFT—Reducers & Extensions

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
 BELOCK INSTRUMENT CORP., 13-11 111th St., College Point, N. Y. ADV. PG. 267.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 CENTRALAB DIV. OF GLOBE-UNION, INC., 914 York Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 JAN HARDWARE MFG. CO., INC., 25-30 163rd St., Flushing 58, N. Y. ADV. PG. 567.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Kupfern Mfg. Co., 398 State St., Binghamton, N. Y.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 1, N. Y.

COUPLINGS, SHAFT—Rigid & Flexible

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill.
 FORD INSTRUMENT DIV., THE SPERRY CORP., 31-10 Thomason Ave., Long Island City, N. Y. ADV. PG. 582.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 164-167.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 JAN HARDWARE MFG. CO., INC., 25-30 163rd St., Flushing 58, N. Y. ADV. PG. 567.
 JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
 Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.
 LORD MFG. CO., 1635 W. 12th St., Erie, Pa. ADV. PG. 78.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 Stow Mfg. Co., 445 State St., Binghamton, N. Y.
 WHITE DENTAL MFG. CO., S. S. INDUSTRIAL DIV., 10 E. 40th St., New York 16, N. Y. ADV. PG. 264.

CROSSES—Microwave

See MICROWAVE ACCESSORIES

Hybrid Junctions—Microwave

CRYSTAL ANALYSIS EQUIPMENT

Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 512.
 Ramsey Industries, Inc., 15-19 Railroad Ave., New Rochelle, N. Y.
 TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

CRYSTAL CARTRIDGES

American Microphone Co., 270 S. Fair Oaks Ave., Pasadena 1, Calif.
 Astatic Corporation, The, Conneaut, Ohio.
 BRAUN TOOL & INSTRUMENT CO., INC., H., 140 Fifth Ave., Hawthorne, N. J. ADV. PG. 346.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Electro-Voice, Inc., Buchanan, Mich.
 MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.

CRYSTAL DETECTORS

See Detectors—Crystal

CRYSTAL DIODES

See Crystals—Germanium-Crystals, Silicon

CRYSTAL MOUNTS AND MIXERS

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.
 CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. ADV. PG. 125.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.

ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, Conn.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 550.
 MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
 TRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
 TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

CRYSTALS—Barium Titanate-Transducer

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Edo Corp., College Point, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.
 ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Guiton Mfg. Corp., Metuchen, N. J.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.

CRYSTALS—Fused Fibre

Amersil Co., Inc., Hillside, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Hanovia Chemical & Mfg. Co., 233 N.J.R.R. Ave., Newark, N. J.
 Thermal Syndicate, Ltd., The, 14 Bixley Heath, Lynbrook, N. Y.

CRYSTALS—Germanium-Rectifying & Amplifying

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Germanium Products Corp., 26 Cornelison Ave., Jersey City 4, N. J.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
 Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass.
 MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 434, 435.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Transtron Electronic Corp., 403-407 Main St., Melrose 76, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

CRYSTALS—Quartz-Frequency Control

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 BLIHEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 361.
 BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
 Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.
 BULOVA WATCH CO., Quartz Crvstal Div., 630 Fifth Ave., New York 20, N. Y. ADV. PG. 333.
 CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
 Cryco, Inc., 1138 Mission St., South Pasadena, Calif.
 Crystal Laboratories, 640 N. Main St., Wichita, Kansas.
 DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, Ill. ADV. PG. 509.

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
 Eidson Electronics Co., 1802 N. Third St., Temple, Texas.
 Electronic, Inc., 67 Sixteenth Ave., SW, Cedar Rapids, Iowa.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
 HUNT CORP., 453 Lincoln St., Carlisle, Pa. ADV. PG. 216.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 KEYSTONE ELECTRONICS CO., 114 Manhattan St., Stamford, Conn. ADV. PG. 517.
 KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 550.
 Lewis Co., E. B., 11 Bragg St., East Hartford 8, Conn.
 McCoy Electronics Co., Mount Holly Springs, Pa.
 MIDLAND MFG. CO., Sunshine & Fiberglass, Kansas City, Kansas. ADV. PG. 96.
 Miller Labs., August E., 9226 Hudson Blvd., North Bergen, N. J.
 Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.
 Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
 PAN AMERICAN TRADE DEVELOPMENT CORP., 2 Park Ave., New York 16, N. Y. ADV. PG. 536.
 Piezo Products Co., Whitney St., Framingham, Mass.
 Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
 Precision Crystal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.
 Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Ramsey Industries, Inc., 15-19 Railroad Ave., New Rochelle, N. Y.
 REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 259.
 Scientific Radio Products, Inc., 1024 Farnam St., Omaha, Neb.
 Scientific Radio Service, 4301 Sheridan St., University Park, Md.
 Sherold Crystals, Inc., 1401 Fairfax Trafficway, Kansas City, Kan.
 Stahl, Inc., Michael, 215 Fulton St., New York 7, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Crystal Co., 1714 Locust St., Kansas City, Mo.
 STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 80.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W.C. 2, England.
 Valnev Crvstal Corp., 1244 Highland St., Holliston, Mass.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.

CRYSTALS—Quartz-Transducer

BLIHEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 361.
 BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
 BULOVA WATCH CO., Quartz Crvstal Div., 630 Fifth Ave., New York 20, N. Y. ADV. PG. 333.
 CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
 Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
 KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 550.
 Lewis Co., E. B., 11 Bragg St., East Hartford 8, Conn.
 Miller Labs., August E., 9226 Hudson Blvd., North Bergen, N. J.
 Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.
 Piezo Products Co., Whitney St., Framingham, Mass.
 Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
 Precision Crvstal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.
 REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 259.
 Sherold Crystals, Inc., 1401 Fairfax Trafficway, Kansas City, Kan.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Crystal Co., 1714 Locust St., Kansas City, Mo.
 Valnev Crvstal Corp., 1244 Highland St., Holliston, Mass.

CRYSTALS—Raw

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.
 Diamond Drill Carbon Co., 53-63 Park Row, New York 38, N. Y.
 Maryland Lava Co., Bel Air, Md.
 Murray American Corp., 95 Summit Ave., Summit, N. J.
 PAN AMERICAN TRADE DEVELOPMENT CORP., 2 Park Ave., New York 16, N. Y. ADV. PG. 536.

CRYSTALS—Rochelle Salts, Transducer

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.

Edo Corp., College Point, N. Y.
Tibbets Industries, Inc., Camden, Maine.

CRYSTALS—Scintillation Counter

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
EL-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
Macdonald Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass.
National Radiac, Inc., 10 Crawford St., Newark, N. J.
Northern Electronic & Vacuum Industries, St. Sauveur, P. Q., P. O. Box 105M, Canada.
Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
Precision Radiation Instruments Inc., 2235 S. LaBrea Ave., Los Angeles 16, Calif.
R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
Tracerlab, Inc., 130 High St., Boston 10, Mass.
Wood Counter Laboratory, N., 5491 Blackstone, Chicago 37, Ill.

CRYSTALS—Silicon-Rectifying & Amplifying

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 434, 435.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 9, N. Y. ADV. PG. 654-660.
Transitron Electronic Corp., 403-407 Main St., Melrose 76, Mass.

CRYSTALS—Tourmaline-Frequency Control

CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
Miller Labs., August E., 9226 Hudson Blvd., North Bergen, N. J.
Polytech Devices, Inc., 1180 E. Grand Ave., Elizabeth, N. J.
Sherold Crystals, Inc., 1401 Fairfax Trafficway, Kansas City, Kan.
Valpey Crystal Corp., 1244 Highland St., Holliston, Mass.
Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.

CRYSTALS—Unfinished

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.
BULOVA WATCH CO., QUARTZ CRYSTAL DIV., 630 Fifth Ave., New York 20, N. Y. ADV. PG. 333.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
Eidson Electronic Co., 1802 N. Third St., Temple, Texas.
Lewis Co., E. B., 11 Bragg St., East Hartford 8, Conn.
MIDLAND MFG. CO., Sunshine & Fiberglass, Kansas City, Kansas. ADV. PG. 96.
Monitor Products Company, 815 Fremont Ave., South Pasadena, Calif.
Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn 13, N. Y.
Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
Precision Crystal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.
Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.
Ramsey Industries, Inc., 15-19 Railroad Ave., New Rochelle, N. Y.
Standard Crystal Co., 1714 Locust St., Kansas City, Mo.
Valpey Crystal Corp., 1244 Highland St., Holliston, Mass.
Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.

CYCLOTRONS

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

DECADE BOXES—Capacitance

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
Muirhead & Co., Ltd., Beckenham, Kent, England.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 569.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

DECADE BOXES—Inductance

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
LENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. ADV. PG. 540.
Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
Muirhead & Co., Ltd., Beckenham, Kent, England.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 569.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TOROCOIL CO., 1374 Mobile Court, St. Louis, Mo. ADV. PG. 436.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

DECADE BOXES—Resistance

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Oregon.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
EASTERN PRECISION RESISTOR CORP., 131-11 90 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
ELECTRO-MEC LABORATORY, 210 43rd Ave., Long Island City, N. Y. ADV. PG. 486.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
Gates Radio Co., Quincy, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Marma Electronic Co., 703 Willow St., Chicago 14, Ill.
Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
Muirhead & Co., Ltd., Beckenham, Kent, England.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 92.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 569.
Rochester Electronics Co., Inc., Box 227, Penfield, N. Y.
Ruhicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
Telex, Inc., Telex Park, St. Paul 1, Minn.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

DEFLECTION YOKES

See Yokes, Deflection

DEHYDRATORS—Automatic

Communication Products Co., Inc., Marlboro, N. J.
Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.

DELAY LINES

ADVANCE ELECTRONICS CO., 451 Highland Ave., Paterson, N. J. ADV. PG. 621.
AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton, Mass. ADV. PG. 204, 205.
ANDERSEN LABORATORIES, INC., 39 Talcott Rd., West Hartford 10, Conn. ADV. PG. 497.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BREW & CO., INC., RICHARD D., 106 Concord Ave., Belmont 78, Mass. ADV. PG. 544.
Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
BURROUGHS CORP., Electronic Instruments Div., 51 N. Broad St., Philadelphia 23, Pa. ADV. PG. 211-214.
Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
COMMUNICATION MEASUREMENTS LAB., INC., 3 Leland Ave., Plainfield, N. J. ADV. PG. 524.
Computing Devices of Canada, Ltd., 338 Queen St. Ottawa 4, Ontario.
Control Electronics Co., Inc., 1925 New York Ave., Huntington Station, N. Y.
Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
Electronic Computer Div., Underwood Corp., 160 Avenue of the Americas, New York 13, N. Y.
Electronic Systems Co., 578 E. 161st St., New York 51, N. Y.
Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 31, Ill.
Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
Engineering Research Associates, Div. of Remington-Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
FEDERAL TELEPHONE & RADIO CORP., 83 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
Geotronic Labs., Inc., Dallas 11, Texas.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
Gulton Mfg. Corp., Metuchen, N. J.
Hycron Mfg. Co., 2961 E. Colorado St., Pasadena 4, Calif.
Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda, Md.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
May Co., Donald M., 6055 Lankershim Blvd., North Hollywood, Calif.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
Miller Co., J. W., 5917 S. Main St., Los Angeles 2, Calif.
OSSIAN MFG. CO., Box 151A, Ossian, Ind. ADV. PG. 567.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 615.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
SICKLES, F. W., DIV., GENERAL INSTRUMENT CORP., 165 Front St., Chicopee, Mass. ADV. PG. 357.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 514.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
TEL-INSTRUMENT CO., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 623.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 6, Calif.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

DELAY LINES—Solid

ANDERSEN LABORATORIES, INC., 39 Talcott Rd., West Hartford 10, Conn. ADV. PG. 497.
ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 581.
BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 361.

BREW & CO., INC., RICHARD D., 106 Concord Ave., Belmont 78, Mass. ADV. PG. 544.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
 May Co., Donald M., 6055 Lankershim Blvd., North Hollywood, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

DELAY LINES—Ultrasonic

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
ANDERSEN LABORATORIES, INC., 39 Talcott Rd., West Hartford 10, Conn. ADV. PG. 497.
ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 581.
BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 361.
BREW & CO., INC., RICHARD D., 106 Concord Ave., Belmont 78, Mass. ADV. PG. 544.
 Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
OSSIAN MFG. CO., Box 151A, Ossian, Ind. ADV. PG. 567.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 514.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

DEMODULATORS—Electronic

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Dnelcam Corp., 56 Elmwood St., Newton 58, Mass.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyncott 11, N. Y. ADV. PG. 500.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
T.L.G. Electric Corp., 31 W. 27th St., New York 1, N. Y.

DENSITOMETERS—Electronic

Applied Research Labs., 4336 San Fernando Rd., Glendale 4, Calif.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
 Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Unltronic, Inc., 472 Paul Ave., Ferguson Station, St. Louis 21, Mo.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

DEPTH SOUNDERS

Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Edo Corp., College Point, N. Y.
 Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.

DETECTORS—Crystal

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Gulton Mfg. Corp., Metuchen, N. J.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Transiron Electronic Corp., 403-407 Main St., Melrose 76, Mass.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wood Counter Laboratory, N., 5491 Blackstone, Chicago 37, Ill.

DETECTORS—Crystal Germanium

See Crystals, Germanium

DETECTORS—Crystal Silicon

See Crystals, Silicon

DETECTORS—Explosive Gas

BRISTOL ENGINEERING CORP., Lincoln Ave & Pond St., Bristol 1, Pa. ADV. PG. 547.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
 Johnson-Williams, Ltd., 2526 3rd St., Palo Alto, Calif.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

DETECTORS—Fire, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Ferrer Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Kirde & Co., Inc., Walter, 477 Main St., Belleville 9, N. J.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.
 Worner Electronic Devices, Rankin, Ill.

DETECTORS—Flaw & Defect, Electronic

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
 Dice Co., J. W., Englewood, N. J.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Magnetic Analysis Corp., 42-44 12th St., Long Island City 1, N. Y.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Sperry Products, Inc., Danbury, Conn.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Vacuum Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.

DETECTORS—Galena

Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

DETECTORS—Impedance

DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

DETECTORS—Leak

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
 Detector Co., 5631 Cahuenga Blvd., North Hollywood, Calif.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Globe Phone Mfg. Co., 2 Linden St., Reading, Mass.
 Magnaflex Corp., 5900 Northwest Hwy., Chicago 31, Ill.
 Menlo Research Laboratory, Menlo Park, Calif.
 National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
 Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.
 Photobell Company, 116 Nassau St., New York 7, N. Y.
 Professional Electronics Co., 180 E. California St., Pasadena, Calif.
 Vacuum Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.

DETECTORS—Null

Airmec Ltd., High Wycombe, Buckinghamshire, England.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Ore.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Macdonald Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Tech Laboratories, Inc., Bergen & Edsall Bldgs., Palisades Park, N. J.
 Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

DETECTORS—Null—r-f

Airmec Ltd., High Wycombe, Buckinghamshire, England.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 91.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

DETECTORS—Null—VTVM

BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 146.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

DETECTORS—Radiation

See Counters, Geiger

DETECTORS—Smoke, Electronic

American Encaustic Tiling Co., Electronic Div., Lansdale, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.

Photobell Company, 116 Nassau St., New York 7, N. Y.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Reeder & Co., Charles M., 171 Victor Ave., Detroit 3, Mich.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.
WATERS MANUFACTURING, INC., 4 Gordon St., Waltham 54, Mass. ADV. PG. 484.
 Wornier Electronic Devices, Rankin, Ill.

DETECTORS—Standing Wave

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 66.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, Conn.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 440.
Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

DETECTORS—Vibration

Atlantic Research Corp., 808 N. Royal St., Alexandria, Va.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 474.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Televico Corp., 7466 W. Irving Park Road, Chicago 34, Ill.
Vibroscope Co., 6 E. 39th St., New York 16, N. Y.

DETECTORS—Water Leak

Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.
Globe Phone Mfg. Co., 2 Linden St., Reading, Mass.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
Menlo Research Laboratory, Menlo Park, Calif.
Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.

DIAL CRYSTALS

Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
PARISIAN NOVELTY CO., 3510 South Western Ave., Chicago 9, Ill. ADV. PG. 617.
Sillcocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.

DIAL LIGHTS

See **LIGHTS—Dial, Panel and Pilot**

DIALS—Instrument

ACKERMAN ENGRAVERS, 458 Broadway, New York, N. Y. ADV. PG. 544.
Acromark Company, The, 9-13 Morrell St., Elizabeth 4, N. J.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton, Mass. ADV. PG. 204, 205.
Anderson & Sons, Inc., Westfield, Mass.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
CAST OPTICS CORP., 1 Post Rd., Riverside, Conn. ADV. PG. 597.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A., Los Angeles 15, Calif.
Coral Design Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
HELIPOT CO., 916 Meridian Ave., South Pasadena, Calif. ADV. PG. 67-70.
Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
Mica Insulator Co., Schenectady 1, N. Y.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
Muirhead & Co., Ltd., Beckenham, Kent, England.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 627.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
Sillcocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
Stromberg-Carlson Co., Rochester 3, N. Y.
Tablet & Ticket Co., 1021 W. Adams St., Chicago 7, Ill.
Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
Transradio, Ltd., 138A Cromwell Rd., London S. W. 7, England.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 381.
Willson Camera Co., Inc., 1401 Lawrence Rd., Haverstown, Pa.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

DIALS—Precision

ACKERMAN ENGRAVERS, 458 Broadway, New York, N. Y. ADV. PG. 544.
Acromark Company, The, 9-13 Morrell St., Elizabeth 4, N. J.
Anderson & Sons, Inc., Westfield, Mass.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Delavan, Wis. ADV. PG. 368.
CAST OPTICS CORP., 1 Post Rd., Riverside, Conn. ADV. PG. 597.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
HELIPOT CORP., 916 Meridian Ave., South Pasadena, Calif. ADV. PG. 67-70.
Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
Muirhead & Co., Ltd., Beckenham, Kent, England.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 627.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.

Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
U. S. RADIUM CORP., 535 Pearl St., New York, N. Y. ADV. PG. 381.

DIAPHRAGMS

BRAUN TOOL & INSTRUMENT CO., INC., H., 140 Ave., Hawthorne, N. J. ADV. PG. 346.
Bristol Co., The, Waterbury 20, Conn.
ETHYLENE CHEMICAL CORP., 245 Broad St., Sun N. J. ADV. PG. 600.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 609.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Hawley Products Co., St. Charles, Ill.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
Stevens Products Inc., 86-88 Main St., East Orange, N. J.
Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

DIATHERMY

American Diathermy Products, Inc., 11858 Mississippi Ave., Los Angeles 25, Calif.
BIRNBACH RADIO CO., INC., 145 Hudson St., York 13, N. Y. ADV. PG. 581.
Burdick Corp., Milton, Wis.
Daltons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
Fischer & Co., R. A., 517 Commercial St., Glendale, Calif.
Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati, Ohio.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 3, Inglewood, Calif.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
Mooradian High Frequency Labs., 13 E. Fort Lee, Bogota, N. J.
Wappler, Inc., 27-10 Astoria Blvd., Long Island City 2, N. Y.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

DIATHERMY ACCESSORIES

American Diathermy Products, Inc., 11858 Mississippi Ave., Los Angeles 25, Calif.
AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hialeah, N. Y. ADV. PG. 429.
BIRNBACH RADIO CO., INC., 145 Hudson St., York 13, N. Y. ADV. PG. 581.
Burdick Corp., Milton, Wis.
Daltons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
Fischer & Co., R. A., 517 Commercial St., Glendale, Calif.
Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati, Ohio.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 3, Inglewood, Calif.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
METAL TEXTILE CORP., 647 E. First Ave., Rosemead, N. J. ADV. PG. 464.
Wappler, Inc., 27-10 Astoria Blvd., Long Island City, N. Y.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

DILECTRIC HEATING

See **Heating, Dielectric**

DILECTRICS—Gas

GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYESTUFF CORP., 40 Rector St., New York 6, N. Y. ADV. PG. 397.

DILECTRICS—Liquid

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Dow Chemical Co., Midland, Mich.
Dow Corning Corp., Midland, Mich.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

DILECTRICS—Solid

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
CENTRALAB DIV. OF GLOBE-UNION INC., 914 Y. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
Dow Chemical Co., Midland, Mich.
Dow Corning Corp., Midland, Mich.

ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
Glucol Products Co., Inc., 26 Court St., Brooklyn, N. Y.
Gulton Mfg. Corp., Metuchen, N. J.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
Integrated Mica Corp., 202 Franklin Place, Woodmere, N. Y.
Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
National Electric Coil Co., Columbus 16, Ohio.
Nico-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 532.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
Schwelitzer, Inc., Peter J., 405 Lexington Ave., New York 17, N. Y.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
J. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

DIES

Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
Acromark Company, The, 9-13 Morrell St., Elizabeth 4, N. J.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
Barrett Bindery Co., 1332 W. Monroe St., Chicago 7, Ill.
CARBOLLOY DEPT. OF GENERAL ELECTRIC CO., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 20.
Mass Machine Co., 691 Antoinette St., Detroit 2, Mich.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
Eltran Corp., St. Anne, Ill.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke, Mich.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
KOBYZ TOOL CO., 1535 N. Dayton Ave., Chicago 22, Ill. ADV. PG. 252.
Lansky Die Cutting Corp., 192½ Greene St., New York 12, N. Y.
Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
Matthews & Co., James H., 470 Atlantic Ave., Boston 10, Mass.
Micra Craft Products, Inc., 703 McCarter Highway, Newark 5, N. J.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
Romac Products Co., 48-01 25th Ave., Long Island City 3, N. Y.
Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 595.
Whistler & Sons, Inc., S. B., 752 Military Rd., Buffalo 23, N. Y.
Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.

DIODES—Germanium

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
British Industries Corp., 164 Duane St., New York 13, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
Germanium Products Corp., 26 Cornelison Ave., Jersey City 4, N. J.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 473.
HUGHES AIRCRAFT CO., Florence Ave. at Teale St., Culver City, Calif. ADV. PG. 269.

Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.
INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave., El Segundo, Calif. ADV. PG. 499.
Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 434, 435.
Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass.
Transitron Electronic Corp., 403-407 Main St., Melrose 76, Mass.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dent. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.
Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

DIRECTION FINDERS

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
Federal Telecommunication Labs., Inc., 500 Washington Ave. Nutley 10, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y.
Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
Raytheon Mfg. Co., Special Products Div., 4132 W. Belmont Ave., Chicago 41, Ill.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Televisto Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

DISCS—Blank Recording

Advance Recording Products Co., 36-12 34th St., Long Island City, N. Y.
Allied Recording Products Co., 32-32 Greenpoint Ave., Long Island City, N. Y.
AUDIO DEVICES, INC., 444 Madison Ave., New York 22, N. Y. ADV. PG. 347.
Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
Duotone Co., Inc., Keyport, N. J.
Home Recording Products Corp., Freeport, N. Y.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 271.
Recordisc Corp., 395 Broadway, New York, N. Y.
Reoton Corp., 147 W. 22nd St., New York 11, N. Y.
Reeves Soundcraft Corp., 10 E. 52nd St., New York, N. Y.
Sonic Recording Products, Inc., 58 Mill Road, Freeport, N. Y.
Sound Scriber, 146 Munson St., New Haven 4, Conn.
Zephyr Products Co., 129 E. 124th St., New York 35, N. Y.

DOSIMETERS

Bendix Aviation Corp., 203 W. Third St., Cincinnati 2, Ohio.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.
Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Corning Glass Works, Corning, N. Y.
Magnox Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
Menlo Research Laboratory, Menlo Park, Calif.
Nucleonic Company of America, 497 Union St., Brooklyn 31, N. Y.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
Tracerlab, Inc., 130 High St., Boston 10, Mass.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

DRAFTING EQUIPMENT

Anco Wood Specialties, Inc., 71-8 80th St., Brooklyn 27, N. Y.
Arkwright Finishing Co., Providence, R. I.
Bruning Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.
Dietzgen Co., Eugene, 2425 Sheffield Ave., Chicago, Ill.
Eagle Pencil Co., 703 E. 13th St., New York, N. Y.
Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N. Y.
Flatto Mfg. Co., 7 W. 40th St., New York 18, N. Y.
General Photo Products Co., Inc., General Photo Bldg., 15 Summit Ave., Chatham, N. J.
Griffin Co., John, 2157 James Ave., St. Paul 5, Minn.
Holliston Mills Inc., Norwood, Mass.
Keuffel & Esser Co., Hoboken, N. J.
Koh-I-Noor Pencil Co., Bloomsbury, N. J.
Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, Ill.
Post Co., Frederick, 3650 N. Avondale Ave., P. O. Box 803, Chicago 90, Ill.
Staedtler Inc., J. S., 55 Worth St., New York, N. Y.
Universal Drafting Machine Corp., 7960 Lorain Ave., Cleveland 2, Ohio.

DRILL PRESSES—Precision

Phillips & Hiss Co., Inc., 1155 N. McCadden Place, Hollywood 38, Calif.

DRIVERS—Recording

Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.

DRIVES—Small Electric Drive Mechanisms

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Anglo Corp., 2037 W. Division St., Chicago 22, Ill.
Avor Corp., 450 Broome St., New York 13, N. Y.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill.
Duncan & Bayley, Division, 785 Hertel Ave., Buffalo 7, N. Y.
ECLIPSE PIONEER DIV. BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
Gleason-Avery, Inc., Auburn, N. Y.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
Servo-Tek Products Co., Inc., 1086 Goffle Rd., Hawthorne, N. J.
Televisto Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

DRUMS—Memory, Magnetic Recording

Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
Gorrell & Gorrell, Haworth, N. J.
Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
Librascope, Inc., 1607 Flower St., Glendale 1, Calif.
Macdonald Co., Inc., W.S., 33 University Rd., Cambridge 38, Mass.
Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 514.

DRYERS, ELECTRONIC—Dehydration & Drying

Air Control Installations, Ltd., Ruislip, Middlesex, England.

Fostoria Pressed Steel Corp., Fostoria, Ohio.
Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
Young Brothers Co., 1829 Columbus Rd., Cleveland, Ohio.

DYNAMOMETERS

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
Dillon & Co., Inc., W. C., 14620 Keswick St., Van Nuys, Calif.
Duncan & Bayley, Division, 785 Hertel Ave., Buffalo 7, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
L. A. B. Corp., 31 Union Place, Summit, N. J.
MISSION-WESTERN ENGINEERS, INC., 132-134 W. Colorado St., Pasadena 1, Calif. ADV. PG. 574.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

DYNAMOTORS

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
CARTER MOTOR CO., 2644 N. Maplewood Ave., Chicago 47, Ill. ADV. PG. 506.
CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. ADV. PG. 569.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. ADV. PG. 120.
Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 592.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 298.
Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
MISSION-WESTERN ENGINEERS, INC., 132-134 W. Colorado St., Pasadena 1, Calif. ADV. PG. 574.
Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
Pioneer Gen-E-Motor Corp., Dept. EBG, 5841 W. Dickens, Chicago 39, Ill.
RED BANK DIVISION, Bendix Aviation Corp., Eatontown, N. J. ADV. PG. 134.
Redmond Co., Inc., Elm St., Owosso, Mich.
Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa.

ELBOWS

See **MICROWAVE ACCESSORIES**
Bends—Microwave

ELECTROCARDIOGRAPHS

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
Burdick Corp., Milton, Wis.
Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
Edin Co., Inc., 207 Main St., Worcester, Mass.
Electrodyne Co., Endicott St., Norwood, Mass.
Electro-Physical Laboratories, Inc., 65 Harvard Ave., Stamford, Conn.
Hathaway Instrument Co., 1315 S. Clark St., Denver 10, Colo.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.
Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

ELECTRODES—High Frequency

Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.
Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
Wapler, Inc., 27-10 Astoria Blvd., Long Island City 2, N. Y.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

ELECTROENCEPHALOGRAPHS

Edin Co., Inc., 207 Main St., Worcester, Mass.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Electro-Physical Laboratories, Inc., 65 Harvard Ave., Stamford, Conn.
Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.

ELECTRO MAGNETS

See **Magnets**

ELECTROMETERS

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 72.
Land-Air, Inc., 440 W. Superior St., Chicago 10, Ill.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.

ELECTROMYOGRAPHS

Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
Edin Co., Inc., 207 Main St., Worcester, Mass.
Electrodyne Co., Endicott St., Norwood, Mass.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.

ELECTROPLETHYSMOGRAPHS

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
Edin Co., Inc., 207 Main St., Worcester, Mass.
Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

ELECTRO-SHOCK THERAPY APPARATUS

Burdick Corp., Milton, Wis.
Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
Electrodyne Co., Endicott St., Norwood, Mass.
Electronic Medical Foundation, 2452 Van Ness Ave., San Francisco, Calif.
Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

ELECTRO-SURGICAL APPARATUS

Burdick Corp., Milton, Wis.
Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Electronic Medical Foundation, 2452 Van Ness Ave., San Francisco, Calif.
Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

ELEMENTS—Heating

Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Columbia Resistors, Inc., 216 Lafayette St., New York 12, N. Y.
Cox & Co., Inc., 50 Broad St., New York 4, N. Y.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
GALBRAITH & SON ELECTRIC CORP., C. C., 450 Avenue of the Americas, New York 11, N. Y. ADV. PG. 542.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Master Appliance Mfg. Co., Fourth & Ontario Racine, Wis.
Miskella-Infra-Red Co., E. 73rd St. & Grand Cleveland 4, Ohio.
OHMWEVE CO., 43 Darcy St., West Hartford 6, Conn. ADV. PG. 462.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
VULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass. ADV. PG. 279.
Wade Electric Products Co., 400 Jacob St., St. Louis, Mich.
Wall Mfg. Co., Grove City, Pa.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 10, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

ELEMENTS, HEATING—Crystal Oven

Cox & Co., Inc., 50 Broad St., New York 4, N. Y.
Miskella-Infra-Red Co., E. 73rd St. & Grand Cleveland 4, Ohio.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.

EMBEDDED ASSEMBLIES

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
American Radio Hardware Co., Inc., 152 MacQueen Pkwy., Mt. Vernon, N. Y.
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
Avor Corp., 450 Broome St., New York 13, N. Y.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul, Minn.
Cable Electric Products Co., Providence, R. I.
Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
Cole Instrument Co., 1320 S. Grand Ave., Dept. 1, Los Angeles 15, Calif.
DeLuxe Coils, Inc., Wabash, Ind.
DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
EASTERN PRECISION RESISTOR CORP., 130-11 41st Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda, Md.
MacLeod & Hanopol, Inc., 10 Roland St., Charles 29, Mass.
P C A ELECTRONICS INC., 2180 Colorado Ave., San Monica, Calif. ADV. PG. 580, 581.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
Square Root Mfg. Corp., 391 Saw Mill River Pkwy., Yonkers, N. Y.
Techron Co., 254-256 Friend St., Boston 14, Mass.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.

EMBEDDED COMPONENTS

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
American Radio Hardware Co., Inc., 152 MacQueen Pkwy., Mt. Vernon, N. Y.
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
Avor Corp., 450 Broome St., New York 13, N. Y.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul, Minn.
Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
Circuitron, Inc., 400 Ninth St., Hoboken, N. J.
Cole Instrument Co., 1320 S. Grand Ave., Dept. 1, Los Angeles 15, Calif.
DeLuxe Coils, Inc., Wabash, Ind.
EASTERN PRECISION RESISTOR CORP., 130-11 41st Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda, Md.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
P C A ELECTRONICS INC., 2180 Colorado Ave., San Monica, Calif. ADV. PG. 580, 581.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
Square Root Mfg. Corp., 391 Saw Mill River Pkwy., Yonkers, N. Y.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

ENCAPSULATION SERVICES

Acme Wire Co., New Haven 14, Conn.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
 Avior Corp., 450 Broome St., New York 13, N. Y.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
 DeLuxe Coils, Inc., Wabash, Ind.
DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
EASTERN PRECISION RESISTOR CORP., 131-11 90 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda, Md.
KALBELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.
 Melpar, Inc., 452 Swann Ave., Alexandria, Va.
 Missouri Research Labs., 2109 Locust St., St. Louis 3, Mo.
 Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
T.L.G. Electric Corp., 31 W. 27th St., New York 1, N. Y.
 Technon Co., 254-256 Friend St., Boston 14, Mass.
 Teletron Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.

ENGRAVING & PROFILING—Services

Auto Engraver Co., Ridgefield, Conn.
 Glass & Bro., Harry, 10 Van Cortlandt Ave. E., Bronx 68, N. Y.
 Hermes Engraving Co., 13 University Place, New York 3, N. Y.

ESCUTCHEONS

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Anderson & Sons Inc., Westfield, Mass.
 Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.
 Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
 Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
 Fairchild Recording Equipment Co., 154th St. & 7th Ave., Whitestone, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
 Precision Plastic Products, Inc., 628-30 W. Lake St., Chicago 6, Ill.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

EYELETS

AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 Atlas Tack Corp., Pleasant St., Fairhaven, Mass.
 Barrett Bindery Co., 1332 W. Monroe St., Chicago 7, Ill.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JOHNSON & HOFFMAN MFG. CO., 31 E. Second St., Mineola, N. Y. ADV. PG. 358, 359.
 Metro, Inc., R. I., 230 Toronto Ave., Providence, R. I.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
 Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
 Segal, Edward, 72 Spring St., New York 12, N. Y.
 Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
UCINITE CO., Div. of United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.

UNITED CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 399.
 United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 595.

FABRIC

See Insulation Materials

FACSIMILE

See Recorders, Facsimile

FACSIMILE RECORDING PAPERS

See Recorders, Facsimile

FASTENERS & FASTENING DEVICES

Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
 American Screw Co., Willimantic, Conn.
 Anti-Corrosive Products Co., Castleton-on-Hudson, N. Y.
 Arro Expansion Bolt Co., Boone Ave., Marion, Ohio.
 Boots Aircraft Nut Corp., 55 John St., Stamford, Conn.
 Bristol Co., The, Waterbury 20, Conn.
 Camcar Screw & Mfg. Corp., 600 18th Ave., Rockford, Ill.
 Camloc Fastener Corp., 22 Spring Valley Rd., Paramus, N. J.
 Central Screw Co., 3501 Shields Ave., Chicago 9, Ill.
 Cherry Rivet Co., A Div. of Townsend Co., 231 Winston St., Los Angeles 13, Calif.
 Chicago Rivet & Machine Co., Bellwood, Ill.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
 Continental Screw Co., New Bedford, Mass.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 Dzus Fastener Co., Inc., Box 185, Babylon, N. Y.
ELASTIC STOP NUT CORP., 2330 Vauxhall Rd., Union, N. J. ADV. PG. 335.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
 Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.
 Groov-Pin Corp., 1125 Hendricks Causeway, Ridgefield, N. J.
 Heli-Coil Corp., Shelter Rock Rd., Danbury, Conn.
 Holub Industries, Inc., 414 DeKaib Ave., Sycamore, Ill.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 522.
 Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
 Lion Fastener, Inc., Honeoye Falls, N. Y.
 Milford Rivet & Machine Co., Milford, Conn.
 Nylok Corp., Box 341, Elmira, N. Y.
 Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.
 Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
 Penn Engineering & Mfg. Corp., Box 311, Doylestown, Pa.
 Pheoil Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
 Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N. Y.
 Sclaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Scovill Manufacturing Co., Waterbury 20, Conn.
 Screw Corp. of America, 103 Park Ave., New York 17, N. Y.
 Self Lock Fastener Corp., 259 Stephens St., Belleville 9, N. J.
 Set Screw Mfg. Co., 470 Main St., Bartlett, Ill.
 Shakeproof, Div. of Illinois Tool Works, 2501 N. Keeler Ave., Chicago 39, Ill.
 Simmons Fastener Corp., 1752 N. Broadway, Albany 1, N. Y.
SOUTHCOR DIVISION, SOUTH CHESTER CORP., 1417 Finance Bldg., Philadelphia 2, Pa. ADV. PG. 199.
 Star Expansion Bolt Co., 147 Cedar St., New York 6, N. Y.
 Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 155.
 Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.
UCINITE CO., Div. of United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 399.
 United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.
 Waldes Kohinor Inc., 47-16 Austel Place, Long Island City 1, N. Y.
 Westfield Metal Products Co., Inc., Elm & Burton Sts., Westfield, Mass.

FELTS & FELT PARTS

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 Felters Co., 210 South St., Boston, Mass.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Western Felt Works, 4029 Ogden Ave., Chicago, Ill.

FILTERS—Antenna

AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 66.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
DORNE AND MARGOLIN, 30 Sylvester St., Westbury, N. Y. ADV. PG. 569.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 Gates Radio Co., Quincy, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Penn Television Products Co., Allegheny & Trenton Ave., Philadelphia 34, Pa.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 364.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

FILTERS—Band Elimination

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 202, 203.
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. ADV. PG. 414.
 Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 215.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd., Chicago, Ill. ADV. PG. 577.
CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
DECOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. ADV. PG. 602.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
 Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 Geotronic Labs., Inc., Dallas 11, Texas.
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 473.

HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 568.
 HOPKINS ENGINEERING CO., 2082 Lincoln Ave., Altadena, Calif. ADV. PG. 547.
 HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
 KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
 LaPointe Electronics Inc., Rockville, Conn.
 LENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. ADV. PG. 540.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 NATIONAL CAPACITOR CO., 585 Washington St., Quincy 69, Mass. ADV. PG. 515.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 364.
 TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif.
 TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

FILTERS—Band Pass

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536.
 ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. ADV. PG. 453.
 ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 202, 203.
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
 AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
 AEROVOX CORP., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 202, 203.
 AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 584.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
 ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 296.
 AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 414.
 Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 215.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.

CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd., Chicago, Ill. ADV. PG. 577.
 CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, Ill. ADV. PG. 509.
 DECOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. ADV. PG. 602.
 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electronic Systems Co., 578 E. 161st St., New York 56, N. Y.
 ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
 Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Geotronic Labs, Inc., Dallas 11, Texas.
 GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif. ADV. PG. 626.
 GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 274.
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 473.
 Gulton Mfg. Corp., Metuchen, N. J.
 Harder Co., Donald C., 3338 India St., San Diego 1, Calif.
 HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 568.
 HOPKINS ENGINEERING CO., 2082 Lincoln Ave., Altadena, Calif. ADV. PG. 547.
 HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
 LaPointe Electronics Inc., Rockville, Conn.
 LENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. ADV. PG. 540.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.
 NATIONAL CAPACITOR CO., 585 Washington St., Quincy 69, Mass. ADV. PG. 515.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Selentar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Socialities, Inc., Skunks Miserv Rd., Swooset, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 364.
 TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif.
 TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
 TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
 Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Western-Electro-Acoustic Labs., 204 S. Beverly Dr., Beverly Hills, Calif.

FILTERS—Crystal

Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 361.
 BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 215.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 550.
 Monitor Products Co., 815 Fremont Ave., South Philadelphia, Pa.
 Precision Crystal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.
 REEVES-HOFFMAN CORP., 145 Cherry St., Carle Place, Pa. ADV. PG. 259.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Crystal Co., 1714 Locust St., Kansas City, Mo.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.

FILTERS—Electric Wave Section

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536.
 ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 202, 203.
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
 AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
 CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd., Chicago, Ill. ADV. PG. 577.
 CHICAGO TRANSFORMER DIV., ESSEX WIRE CO., 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.
 COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
 DECOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. ADV. PG. 602.
 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike Philadelphia 40, Pa. ADV. PG. 575.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Geotronic Labs, Inc., Dallas 11, Texas.
 HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.
 LENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. ADV. PG. 540.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.

Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 364.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

FILTERS—Equalizer

Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 215.
CENTRAL TRANSFORMER CO., 910 W. Jackson Ave., Chicago, Ill. ADV. PG. 577.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
DECOURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. ADV. PG. 602.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
EPCO PRODUCTS INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486.
 Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
 Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 Gates Radio Co., Quincy, Ill.
GRAY RESEARCH & DEVELOPMENT CO., INC., 658 Hilliard St., Manchester, Conn. ADV. PG. 469.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
HOPKINS ENGINEERING CO., 2082 Lincoln Ave., Altadena, Calif. ADV. PG. 547.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.
KENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. ADV. PG. 540.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.
NATIONAL CAPACITOR CO., 585 Washington St., Quincy 69, Mass. ADV. PG. 515.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Pacific Transducer Corp., 11921 S.W. Pico Blvd., Los Angeles 64, Calif.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

FILTERS—Lighting (for radio towers)

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 Gates Radio Co., Quincy, Ill.
HUGHY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
JOHNSON CO., E. F., Waseca, Minn., Ill. ADV. PG. 404-407.

Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

FILTERS—Microwave

See MICROWAVE ACCESSORIES

FILTERS—Needle Scratch

COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
 Fisher Radio Corp., 41 E. 47th St., New York, N. Y.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Scott, Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

FILTERS—Radio Interference

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536.
ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. ADV. PG. 453.
ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 202, 203.
AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
 All-Tronics, Inc., 2 Secatog Ave., Port Washington, N. Y.
ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 296.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.
HOPKINS ENGINEERING CO., 2082 Lincoln Ave., Altadena, Calif. ADV. PG. 547.
 Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
NATIONAL CAPACITOR CO., 585 Washington St., Quincy 69, Mass. ADV. PG. 515.
 National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.
 Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
 Potter Co., 1850 Sheridan Rd., North Chicago, Ill.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
SCINTILLA MAGNETO DIV., Bendix Aviation Corp., Sidney, N. Y. ADV. PG. 131.

Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 364.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.

FILTERS—Television

AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
AEROVOX CORP., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 202, 203.
ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 296.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
 Epco Electronics, 140 Liberty St., New York, N. Y.
 Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 LaPointe Electronics Inc., Rockville, Conn.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
NATIONAL CAPACITOR CO., 585 Washington St., Quincy 69, Mass. ADV. PG. 515.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

FILTERS—uhf & vhf

AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
AEROVOX CORP., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 202, 203.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 584.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 296.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 66.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Deison Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electronic Systems Co., 578 E. 161st St., New York 56, N. Y.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
 HOPKINS ENGINEERING CO., 2082 Lincoln Ave., Altadena, Calif. ADV. PG. 547.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
 KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 LaPointe Electronics Inc., Rockville, Conn.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 NATIONAL CAPACITOR CO., 585 Washington St., Quincy 69, Mass. ADV. PG. 515.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 SICKLES, F. W., DIV., GENERAL INSTRUMENT CORP., 165 Front St., Chicopee, Mass. ADV. PG. 357.
 SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 364.
 Transition, Inc., 154 Spring St., New York 12, N. Y.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

FILTERS—Variable Electronic

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. ADV. PG. 360.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

FINISHES—Crystal

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

FINISHES—Luminous Materials

APEX COATED FABRICS CO., 12 E. 22nd St., New York 10, N. Y. ADV. PG. 558.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.
 Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.
 U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 381.

FINISHES—Ripple

Bennett Mfg. Co., Alden, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.
 PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.

FIRE

See Detectors

FLANGES—Microwave

See MICROWAVE ACCESSORIES

FLOCK & FLOCKED PAPER

Cellusuede Products, Inc., Rockford, Ill.

Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.

FLOWMETERS

See Controls

FLUID FLOW

See Indicators

FLOUORESCENT COMPOUNDS—Phosphors

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Burton Mfg. Co., 11201 W. Pico Blvd., Los Angeles 64, Calif.
 Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
 PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.
 Pilot Chemicals, Inc., 47 Felton St., Waltham 54, Mass.
 PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.
 U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 381.

FLUOROMETERS

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
 Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.
 Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.

FLUX—Brazing or Soldering

Allen Co., Inc., L. B., 6751 Bryn Mawr Ave., Chicago 31, Ill.
 ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 AMERICAN PLATINUM WORKS, N. J., R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Burnley Battery & Mfg. Co., Clay St., North East, Pa.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Dunton Co., M. W., 7 Goff St., Providence 3, R. I.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Ellanar Chemical Co., 2308 Oakton St., Evanston, Ill.
 Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Handy & Harman, 82 Fulton St., New York 38, N. Y.
 International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
 Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
 Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
 KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 39, Ill. ADV. PG. 465.
 LENK MFG. CO., THE, 30 Cummington St., Boston 15, Mass. ADV. PG. 616.
 Linick Chemical Co., 59 E. Madison St., Chicago 2, Ill.
 London Chemical Co., 325 W. 32nd St., Chicago 16, Ill.
 MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 228.
 MULTICORE SALES CORP., 164 Duane St., New York 13, N. Y. ADV. PG. 77.
 MULTICORE SOLDERS, LTD., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshire, England. ADV. PG. 77.
 National Lead Co., 111 Broadway, New York 6, N. Y.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
 Osborn Products, Glen Ellyn, Ill.
 Pfanstiehl Chemical Co., 104 Lake View Ave., Waukegan, Ill.
 Ruby Chemical Co., 68 McDowell St., Columbus, Ohio.
 Special Chemicals Corp., 30 Irving Pl., New York 3, N. Y.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.

Wall Mfg. Co., Grove City, Pa.
 Wildberg Bros., Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

FLUXMETERS

Associated Research, Inc., 3788 W. Belmont Chicago 18, Ill.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Dyna Labs, Inc., 1075 Stewart Ave., Garden City, N. Y.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Klein-Electronics, Leo, 2404 S. LaBrea Ave., Los Angeles 16, Calif.
 MARION ELECTRICAL INSTRUMENT CO., 402 Cambridge St., Manchester, N. H. ADV. PG. 472.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 Park St., Cambridge 42, Mass. ADV. PG. 592.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Mt. Vernon, N. Y. ADV. PG. 617.
 T. L. G. Electric Corp., 31 W. 27th St., New York 1, N. Y.
 VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 392, 393.

FOCUS COILS

See Inductances, Television Focusing

FORKS—Electrically Driven Tuning

Acme Teletronix Div., NEA Service, Inc., W. T. & Lakeside, Cleveland 13, Ohio.
 AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 36, N. Y. ADV. PG. 505.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Muirhead Co., Ltd., Beckenham, Kent, England.
 PHILAMON LABORATORIES, INC., 5717 Third Ave., Brooklyn 20, N. Y. ADV. PG. 582.
 Pioneer Electric & Research Corp., 743 Circle A Forest Park, Ill.
 Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.
 TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 384.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

FORMS—Antenna

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 STEWARD MFG. CO., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomsfield, N. J. ADV. PG. 453.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.

FORMS—Coil

See Also Bobbins

Alpha Electronics, Inc., Route 17, Ramsey, N. J.
 AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 AMERICAN MOLDED PRODUCTS CO., 1644 N. Howard St., Chicago 22, Ill. ADV. PG. 538.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
 CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
 CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 CLEVELAND CONTAINER CO., THE, 6201 Barber Ave., Cleveland 2, Ohio. ADV. PG. 345.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Corning Glass Works, Corning, N. Y.
 CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Chicago 11, N. J. ADV. PG. 485.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
 GENERAL CERAMICS & STEATITE CORP., Keast N. J. ADV. PG. 145, 147.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 274.
 Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Inter Products Co., 41 Union St., Manchester, N. H.
IRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Insulator Co., Schenectady 1, N. Y.
 Carta Fabricators Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Insulating Corp. of America, 40 Church St., Pawtucket, R. I.
LYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 National Ceramic Co., 400 Southard St., Trenton 2, N. J.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 362, 363.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 No-Sil Corp., 26 Cornelson Ave., Jersey City 4, N. J.
 Wireless Products Industries, 812 N. Pulaski St., Chicago 51, Ill.
 Reger Products, 3901 W. 54th St., Los Angeles, Calif.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
 Quality Components, Inc., St. Marys, Pa.
 Resistor Division, Speer Carbon Co., St. Marys, Pa.
SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 626.
TACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
TEWARD MFG. CO., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
TUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 Thane Corp., Oaks, Pa.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

FORMS—Resistor

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
KOWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 No-Co Ceramics Co., Box 587, Butler 8, Pa.
ELECTRONICS MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
IRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 362, 363.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
PRECISION RESISTOR CO., 334 Badger Ave., Newark 8, N. J. ADV. PG. 330.
 Saxenborg Ceramics, Saxenborg, Pa.
TACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
TEWARD MFG. CO., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
TUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.

FORMS—Wire

Audek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
 Arctico Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
 Newcomb Spring Corp., 3907 7th Ave., Brooklyn 32, N. Y.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
 Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
 Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 Scovill Manufacturing Co., Waterbury 20, Conn.
 Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

FREQUENCY INDICATORS

See Indicators

FREQUENCY STANDARDS

See Standards—Frequency

FURNACES—Electric (for Electronic Component Production)

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 Electric Furnace Co., Salem, Ohio.
 Forter-Teichmann Co., Clark Bldg., Pittsburgh, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Harper Electric Furnace Corp., 39E-River St., Buffalo 2, N. Y.
 Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago 37, Ill.
 Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Lindberg Engineering Co., 2450 Hubbard St., Chicago, Ill.
 Stewart-Speller Associates, Soquel, Calif.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

FURNACES—High Frequency

Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.
 Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
 Stewart-Speller Associates, Soquel, Calif.

FUSE HOLDERS

See Blocks

FUSES

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
BEL-FUSE, INC., 311 Mountain Road, Union City, N. J. ADV. PG. 602.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BUSSMAN MFG. CO., St. Louis 7, Mo. ADV. PG. 28.
 Cable Electric Products Co., Providence, R. I.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S, Long Island City, N. Y.
 Economy Fuse & Mfg. Co., 2717 Greenview Ave., Chicago 14, Ill.
 General Fuse Co., 16 Robert St., South River, N. J.
LITTELFUSE, INC., Des Plaines, Ill. ADV. PG. 482.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.

GAGES—Comparator

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill.
 Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Metron Instrument Co., 432 Lincoln St., Denver 9, Colo.
 Missouri Research Labs., 2109 Locust St., St. Louis 3, Mo.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Scherr Co., Inc., Geo., 200 Lafayette St., New York 12, N. Y.

GAGES—Displacement Measuring

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 288.
 Foxboro Co., The, Foxboro, Mass.
 Gufton Mfg. Corp., Metuchen, N. J.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.

GAGES—Electronic Fuel Indicator

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

GAGES—Electronic Inspection

Arma Corp., 254 36th St., Brooklyn 32, N. Y.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
 Bright Radio Labs., Inc., 24-28 45th St. Long Island City 3, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Dice Co., J. W., Englewood, N. J.
 DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 564.

GAGES—Electronic Spring Checking

I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.

GAGES—Ionization

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.
 National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stewart-Speller Associates, Soquel, Calif.
 Vacuum Tube Products, 506 S. Cleveland St., Ocean-side, Calif.

GAGES—Paint Depth

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.

Dice Co., J. W., Englewood, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

GAGES—Photoelectric Dimension

Autotron Co., The, Danville, Ill.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.

GAGES—Pirani

Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
 Continental Electric Co., Geneva, Ill.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haydu Brothers, Plainfield, N. J.
 National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

GAGES—Pressure, Electronic

Atlantic Research Corp., 808 N. Royal St., Alexandria, Va.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bristol Co., The, Waterbury 20, Conn.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 288.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Gulton Mfg. Corp., Metuchen, N. J.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Michigan.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
 Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.
 Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 514.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

GAGES—Spring Tension

Imtra Corp., 58 Charles St., Cambridge 41, Mass.

GAGES—Strain

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gulton Mfg. Corp., Metuchen, N. J.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colorado.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.

Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
 Technograph Printed Electronics Inc., 191 Main St., Tarrytown, N. Y.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

GAGES—Ultrasonic Thickness

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
 Dice Co., J. W., Englewood, N. J.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Sperry Products, Inc., Danbury, Conn.

GAGES—Vacuum

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
 Bristol Co., The, Waterbury 20, Conn.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
 Continental Electric Co., Geneva, Ill.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Haydu Brothers, Plainfield, N. J.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.
 National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
 Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Pa.
 Scientific Specialties Corp., Snow & Union Sts., Brighton 35, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

GALVANOMETERS

See Instruments—Electrical Measuring

GASES—Nitrogen

Haydu Brothers, Plainfield, N. J.
 Linde Air Products Co., Division of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

GASES—Rare

Haydu Brothers, Plainfield, N. J.
 Linde Air Products Co., Division of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

GASKETS

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Armstrong Cork Co., Lancaster, Pa.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
BAER CO., N. S., 9 Montgomery Ave., Hillside, N. J. ADV. PG. 107.
BRUNN TOOL & INSTRUMENT CO., INC. H., 140 Fifth Ave., Hawthorne, N. J. ADV. PG. 346.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.

Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.
CONNECTICUT TELEPHONE & ELECTRIC CORP., Britannia St., Meriden, Conn. ADV. PG. 590.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 9, Ill.
 Daniels, Inc., C. R., Box 6908, Baltimore, Md.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
ELECTRONIC MECHANICS, INC., 101 Clifton Clifton, N. J. ADV. PG. 485.
ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. ADV. PG. 600.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Chicago 51, Ill.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 609.
 Garlock Packing Co., Palmyra, N. Y.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Lansky Die Cutting Corp., 192½ Greene St., New York 12, N. Y.
 Masonite Corp., 111 W. Washington St., Chicago 21, Ill.
METAL TEXTILE CORP., 647 E. First Ave., Rochester 3, N. J. ADV. PG. 464.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minnesota Rubber & Gasket Co., 3630 Wooddale Minneapolis 16, Minn.
 Molding Corp. of America, 40 Church St., Pawtucket, R. I.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Rogers Corp., Manchester, Conn.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Taylor Fibre Co., Norristown, Pa.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
 Whitehead Stamping Co., 1691 W. Lafayette St., Detroit 16, Mich.
 Wilmington Fibre Specialty Co., P. O. Drawer 3, Wilmington 99, Del.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Dr., Culver City, Calif.

GEARS—Precision

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 American Machine & Foundry Co., Electronics Div., Commonwealth Ave., Boston 15, Mass.
 Arch Gear Works, Inc., Quincy, Mass.
 Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
 Beaver Gear Works, Inc., 1038 Parmele St., Rock Hill, S. C.
BELOCK INSTRUMENT CORP., 13-11 111th St., Coxsack, N. Y. ADV. PG. 267.
 Boehme, Inc., H. O., 915 Broadway, New York 10, N. Y.
BOWMAR INSTRUMENT CORP., 2415 Pennsylvania Ave., Fort Wayne, Ind. ADV. PG. 570.
 Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill.
 Gear Specialties, Inc., 2635 W. Medill Ave., Chicago 47, Ill.
 Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.
MISSION-WESTERN ENGINEERS, INC., 132-134 Colorado St., Pasadena 1, Calif. ADV. PG. 574.
 Missouri-Research Labs., 2109 Locust St., St. Louis 8, Mo.
 Northfield-Linden Corp., 147 Ocean Ave., Lynbrook, N. Y.
 Powdered Metal Products Corp., Franklin Park, Ill.
 Quaker City Gear Works, Red Lion & Philmont Bethayres, Pa.
RADIO CORES, INC., 9540 Tulley Ave., Oak Lawn, Ill. ADV. PG. 136.
RESEARCH DEVELOPMENT MANUFACTURE, 429 Collom St., Philadelphia 44, Pa. ADV. PG. 509.
 Rvnel Corp., Miller St., Sterling, Ill.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Shakeproof, Div. of Illinois Tool Wks, 2501 N. Kedzie Ave., Chicago 39, Ill.
TRANSICOIL CORP., 107 Grand St., New York 10, N. Y. ADV. PG. 461.
 U. S. Graphite Co., Div. of The Wickes Corp., 11 Holland Ave., Saginaw, Mich.
 Western Gear Works, 2600 E. Imperial Highway, Anaheim, Calif.
 Winzler Mfg. & Tool Co., 1716 W. Arcade Pl., Chicago 12, Ill.

GENERATORS—Electronic

1. AM-FM
2. Harmonic Frequency
3. Microwave
4. Pulse
5. Variable Frequency
6. Ultrasonic
7. Waveform
8. Picture Signal

9. Square Wave
10. Signal, a-f
11. Signal, f-m
12. Signal, r-f
13. Signal, shf
14. Signal, Sweeping
15. Signal, Television Synchronizing
16. Signal, uhf or vhf

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y. 5.

AIRCRAFT RADIO CORP., Boonton, N. J. 16. ADV. PG. 168.

Airmec Ltd., High Wycombe, Buckinghamshire, England. 10-12.

ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. 6. ADV. PG. 515.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. 10.

AMERICAN CHRONOSCOPE CORP., 316 West First St., Mt. Vernon, N. Y. 6. ADV. PG. 546.

American Electroengineering Corp., 2040 Colorado Ave., Santa Monica, Calif. 3-5-9-10-12.

AMERICAN ELECTRONIC LABS., INC., 641 Arch St., Philadelphia 6, Pa. 4-9. ADV. PG. 528.

AMPLITRONIX INC., 280 Ninth Ave., New York 1, N. Y. 7. ADV. PG. 466.

ANDERSEN LABORATORIES, INC., 39 Talcott Rd., West Hartford 10, Conn. 6. ADV. PG. 497.

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y. 10-11-12-13-14-16.

A.R.F. Products, Inc., 7627 Lake St., River Forest, Ill. 5-11-12.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. 4. ADV. PG. 302.

Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif. 4-9.

Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J. 11-12-14.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 10. ADV. PG. 239.

BERKELY SCIENTIFIC CORP., Richmond, Calif. 4. ADV. PG. 137.

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. 4-7. ADV. PG. 562.

Bludworth Marine Div., National Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. 6.

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y. 3.

BOONTON RADIO CORP., Boonton, N. J. 1-5-11-12-14-16. ADV. PG. 187.

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pord St., Bristol 1, Pa. 4-5-7-10. ADV. PG. 547.

BURROUGHS CORP., Electronic Instruments Div., 511 N. Broad St., Philadelphia 23, Pa. 4-7. ADV. PG. 211-214.

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. 14. ADV. PG. 558.

Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif. 3-14.

Carlson & Nicholson, Inc., 497 Maynard Drive, Buffalo 21, N. Y. 4.

CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxford St., Van Nuys, Calif. 3. ADV. PG. 573.

Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England. 4-5-8-9-14-15.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. 4-7. ADV. PG. 616.

Clough Brengle Co., 6014 N. Broadway, Chicago, Ill. 10-12. ADV. PG. 14.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif. 5-12.

Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y. 12-16.

COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. 5. ADV. PG. 524.

Computing Devices of Canada Ltd., 338 Queen St., Ottawa 4, Ontario. 2-5-9.

CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. 16. ADV. PG. 590.

Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. 12.

Crystal Research Labs., Inc., 29 Allyn St., Hartford, Conn. 6.

Cubic Corp., 2841 Canon St., San Diego 6, Calif. 3.

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif. 6.

DAVEN CO., 191 Central Ave., 191 Central Ave., Newark 4, N. J. 10. ADV. PG. 79.

DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. 2-5-11-12-16. ADV. PG. 516.

DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. 3-9.

DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. 4. ADV. PG. 609.

DuMont Laboratories, Inc., Allen B., Instrument Div., 750 Bloomfield Ave., Clifton, N. J. 9.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J. 15.

ELECTRICAL & PHYSICAL INSTRUMENT CORP., 42-19 27th St., Long Island City 1, N. Y. 9. ADV. PG. 216.

El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa. 4-5-9-14.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. 1-9-10-11-12-14. ADV. PG. 349.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y. 12.

ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. 3. ADV. PG. 555.

Electro-Mechanical Research, Inc., Ridgefield, Conn. 9.

EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. 3-4. ADV. PG. 395.

Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. 12.

FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. 1-12-16. ADV. PG. 415.

Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J. 15.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. 1-2-3-4-5-7-8-9-10-11-12-13-14-16.

Ferris Instrument Co., 110 Cornelia St., Boonton, N. J. 11-12-16.

FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. 7-8-9-10-12-14-16. ADV. PG. 575.

G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif. 12-16.

Gates Radio Co., Quincy, Ill. 1-5.

GENERAL COMMUNICATION CO., 681 Beacon St., Boston 15, Mass. 11-12. ADV. PG. 311.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Road, Scenectady 5, N. Y. 6. ADV. PG. 1-18.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. 9-11-12-14. ADV. PG. 1-18.

GENERAL ELECTRONICS, INC., 32 W. 22nd St., New York 10, N. Y. 5-6. ADV. PG. 568.

GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. 15. ADV. PG. 256.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 1-4-5-6-7-9-12-16. ADV. PG. 90, 91.

Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y. 14-16.

Grason-Stadler Corp., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass. 4-9-10.

Gufton Mfg. Corp., Metuchen, N. J. 6.

HEATH CO., Benton Harbor, Mich. 5-10-12-14. ADV. PG. 486.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. 1-3-4-5-10-12-13. ADV. PG. 29-34.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. 1-4-5-8-9-10-11-12-14-15-16. ADV. PG. 89.

Hycan Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif. 1-3-4-11-12.

Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y. 10.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio. 10-12-14-15.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. 3-4-5-8-14-16. ADV. PG. 400, 401.

Kinevox Corp., 116 S. Hollywood Way, Burbank, Calif. 5.

KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. 5-6-7-9-10. ADV. PG. 101.

LAVOIE LABORATORIES, Morganville, N. J. 2-4-12. ADV. PG. 419.

Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y. 3.

Manson Laboratories, 207 Greenwich Ave., Stamford, Conn. 4.

Manufacturers Engineering & Equipment Corp., York & Mills Rd., Hattboro, Pa. 14.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. 1-2-3-4-5-6-9-10-11-12-13-14-16. ADV. PG. 385.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. 1-7.

MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. 16. ADV. PG. 144.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada. 9-10.

MEASUREMENTS CORP., Boonton, N. J. 1-2-3-4-5-6-7-9-10-11-12-14-15-16. ADV. PG. 130.

MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. 1-4-5-7-9-10-12. ADV. PG. 127.

Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y. 1-2-10-11-12-13-14-15-16.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England. 6-11.

New London Instrument Co., P. O. Box 189, New London, Conn. 9-11-12-13-14-16.

NORRMAN LABORATORIES, ERNST, Williams Bay, Wis. 2-4. ADV. PG. 620.

Northeastern Engineering Inc., Manchester, N. H. 10-11-12-13.

Pacific Transducer Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif. 10-14.

PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. 5. ADV. PG. 624.

Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa. 10-11-12-14-16.

Piezo Products Co., Whitney St., Framingham, Mass. 6.

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. 3. ADV. PG. 108, 109.

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. 3-14-16. ADV. PG. 122, 123.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y. 1-10-14.

Pulse-Techniques, Inc., 1411 Palisade Ave., West Englewood, N. J. 10.

Radar Engineers, 110 University St., Seattle 1, Wash. 4.

Radiation, Inc., Melbourne, Fla. 16.

RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. 1-8-10-11-12-13-15-16. ADV. PG. 541.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. 15-16. ADV. PG. 295. Inside Back & Back Covers.

Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y. 8.

Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y. 6.

Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill. 4.

Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich. 4.

Raypar, Inc., 7800 W. Addison St., Chicago, Ill. 11.

Reiner Electronics Co., Inc., 152 W. 25th St., New York, N. Y. 9.

Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif. 1-3-4-5-6-7-9-10-11-12-16.

Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Pa. 4.

Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn. 6.

Rollin Co., 2010 N. Lincoln Ave., Pasadena 3, Calif. 1-3-11-12-13-14-16.

Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif. 4-7-9.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. 2-5-7-9-12. ADV. PG. 438, 439.

Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill. 8-9-10-11-15-16.

SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 5. ADV. PG. 62, 63.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. 10.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. 4-9-14. ADV. PG. 476.

SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. 3. ADV. PG. 283, 284.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. 8-11-12-14-15-16.

Standard Electronics Corp., 289 Emmet St., Newark, N. J. 15.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. 2-10-11-12-13-14-15-16.

Superior Instrument Co., 227 Fulton St., New York 7, N. Y. 10-11-12-14-15.

Supreme, Inc., Box E-552, Greenwood, Miss. 10-12-14-16-18.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-11. ADV. PG. 654-660.

Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y. 5.

TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. 4. ADV. PG. 514.

TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. 12. ADV. PG. 97, 447.

Tektronix, Inc., P. O. Box 831, Portland 7, Ore. 4-7-9.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. 1-3-4-7-8-11-12-13-15. ADV. PG. 562.

TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. 1-4-10. ADV. PG. 287.

Television Equipment Corp., 52 Broadway, New York 4, N. Y. 4-5-6-7-9-10-14.

Tevisco Corp., 7466 W. Irving Park Road, Chicago 34, Ill. 6.

TEL-INSTRUMENT CO., 50 Patterson Ave., East Rutherford, N. J. 8-12-14-15-16. ADV. PG. 623.

Telonic Industries, 444 S. Rural, Indianapolis 1, Ind. 14.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. 10-12-13.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. 12. ADV. PG. 234.

Transitron, Inc., 154 Spring St., New York 12, N. Y. 3-4-5.

Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio. 10-11-12-13-15-16.

Ultrasonic Corp., 61 Rogers St., Cambridge, Mass. 6.

Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill. 6.

VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. 3. ADV. PG. 392, 393.

VECTRON, INC., 404 Main St., Waltham 54, Mass. 3. ADV. PG. 457.

Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind. 16.

Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa. 12.

WALKIRT CO., 145 W. Hazel, Inglewood, Calif. 4-5-7-9. ADV. PG. 628.

Wang Laboratories, 296 Columbus Ave., Boston 16, Mass. 4-5-7-8.

WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. 10-11-12-14-16. ADV. PG. 596.

Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif. 12.

Weston Laboratories, Inc., Harvard, Mass. 3-4.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 3.

Wheeler Laboratories, Inc., Great Neck, N. Y. 13-16.

GENERATORS—Engine Driven

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Boque Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

Buda Co., The, Harvey, Ill.

CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. ADV. PG. 569.

Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn.

ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 592.

Gaston Power Tools, Inc., 14829 Loomis St., Harvey, Ill.

General Motors Corp., Detroit Diesel Engine Div., Detroit, Mich.
 Georator Corp., Box 463, Manassas, Va.
 Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.
 Homelite Corp., Port Chester, N. Y.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 298.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
 Kato Engineering Co., 1415 First Ave., Mankato, Minn.
 Midco Mfg. & Distributing Co., Inc., 1129 S. 13th St., Sheboygan, Wis.
 Motoresearch Co., 1600 Junction Ave., Racine, Wis.
 Onan & Sons Inc., D. W., University Ave. at 25th St., S.E., Minneapolis 14, Minn.
 Pioneer Electric Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
 Pioneer Gen-E-Motor Corp., Dept. EBG, 5841 W. Dickens, Chicago 39, Ill.
 Ready Power Co., The Power Plant Div., 11231 Freud Ave., Detroit 14, Mich.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
 Universal Motor Co., 456 Universal Drive, Oshkosh, Wis.
 Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa.

GENERATORS—Hand Driven

ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 592.
 Georator Corp., Box 463, Manassas, Va.
 Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 298.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Stromberg-Carlson Co., Rochester 3, N. Y.

GENERATORS—Motor

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Allis Co., Louis, 427 E. Stewart St., Milwaukee 7, Wis.
 American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif.
 Atlas Coil Winders, Inc., 39 Manhattan St., Stamford, Conn.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
 Columbia Electric Mfg. Co., 4519 Hamilton Ave., N.E., Cleveland 14, Ohio.
CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. ADV. PG. 569.
 Ecco High Frequency Corp., 7020 Hudson Blvd., North Berden, N. J.
ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. ADV. PG. 120.
 Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn.
 Electric Specialty Co., 300 South St., Stamford, Conn.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 592.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Gaston Power Tools, Inc., 14829 Loomis St., Harvey, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Georator Corp., Box 463, Manassas, Va.
 Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 298.
 Jack & Heintz, Inc., Cleveland 1, Ohio.
 Kato Engineering Co., 1415 First Ave., Mankato, Minn.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 Kinevox Corp., 116 S. Hollywood Way, Burbank, Calif.
 Leland Electric Co., The Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio.
MISSION-WESTERN ENGINEERS, INC., 132-134 W. Colorado St., Pasadena 1, Calif. ADV. PG. 574.
 Motoresearch Co., 1600 Junction Ave., Racine, Wis.
OSTER MFG. CO., JOHN, 1 Main St., Racine, Wis. ADV. PG. 494.
 Pioneer Electric Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
 Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio.
 Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
 Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa.

GENERATORS—Winddriven Generating Equipment

D & R Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.
 Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa.
 Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

GEOPHYSICAL APPARATUS

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Edo Corp., College Point, N. Y.
 Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.
 Georator Corp., Box 463, Manassas, Va.
 Geotronic Labs., Inc., Dallas 11, Texas.
 Gorrell & Gorrell, Haworth, N. J.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Jarrel-Ash Co., 165 Newbury St., Boston 16, Mass.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
 Nuclear Development Lab., Box 7034, Kansas City, Mo.
ORTHO CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 569.
 Ruska Instrument Corp., 4607 Montrose Blvd., Houston 6, Texas.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

GERMANIUM CRYSTALS

See Crystals

GERMANIUM DIODES

See Diodes, Germanium

GERMANIUM RECTIFIERS

See Rectifiers, Germanium

GETTERS

See Tube Parts

GLASS

See Insulation Materials

GLASS BONDED MICA

See Insulation Materials

GLASS FIBRE

See Insulation Materials

GLASS—Metal-to-Glass Seals

See SEALS—Metal-to-Glass

GRAPHIC RECORDING INSTRUMENTS

See Instruments, Graphic Recording

GRAPHITE—Colloidal

Acheson Colloids Co., 1950 Washington Ave., Port Huron, Mich.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Grafo Colloids Corp., Sharon, Pa.
 Superior Flake Graphite Co., 33 S. Clark St., Chicago 3, Ill.

GRIDS AND GRID SUPPORTS

See Tube Parts

GRILLES—Metal

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
 Bennett Mfg. Co., Alden, N. Y.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 Hayden Mfg. Co., 173 N. Peoria St., Chicago 7, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Pfeiffer Products, 3901 W. 54th St., Los Angeles, Calif.

REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
 Stone City Machine & Tool Co., Inc., P. O. Box 51206 Seventh St., Bedford, Ind.
 Torngren Co., Inc., C.W., 236 Pearl St., Somerville, Mass.

GRILLES—Molded Plastic

Calresin Corp., 333 N. Santa Anita Ave., P. O. 945, Arcadia, Calif.
 Chicago Die Mold Div. of U. S. Rubber Co., 40 Wrightwood Ave., Chicago 39, Ill.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
 Felsenthal & Sons, Inc., G. 4100 W. Grand Ave., Chicago 51, Ill.
 Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 Molded Insulation Co., 335 E. Price St., Philadelphia 4, Pa.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Syracuse Ornamental Co., Inc., 581 S. Clinton St., Syracuse, N. Y.

GRILLES—Speaker

British Industries Corp., 164 Duane St., New York 14, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Chicago Die Mold Div. of U. S. Rubber Co., 40 Wrightwood Ave., Chicago 39, Ill.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 5, Ill.
 Eltran Corp., St. Anne, Ill.
 Felsenthal & Sons, Inc., G. 4100 W. Grand Ave., Chicago 51, Ill.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Hayden Mfg. Co., 173 N. Peoria St., Chicago 7, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Lanky Die Cutting Corp., 192½ Greene St., New York 12, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Molded Insulation Co., 335 E. Price St., Philadelphia 4, Pa.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Syracuse Ornamental Co., Inc., 581 S. Clinton St., Syracuse, N. Y.

GROMMETS

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
ATLANTIC INDIA RUBBER WORKS, INC., Dept. E, 571 W. Polk St., Chicago 7, Ill. ADV. PG. 580.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Daniels, Inc., C. R., Box 6908, Baltimore, Md.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Dzus Fastener Co., Inc., Box 185, Babylon, N. Y.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Lavelle Rubber Co., 424 N. Wood St., Chicago 22, Ill.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
 Minnesota Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.
 Minor Rubber Co., 49 Ackerman St., Bloomfield, N. J.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
 Plume & Atwood Mfg. Co., 220 Broadway, New York 14, N. Y.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
UCINETE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.

UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 399.
 United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.
 S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 S. Stoneware Co., The, Akron 9, Ohio.

FORMETS—Fibre

EROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 AER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Portland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 Rogers Corp., Manchester, Conn.
 Trefco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Taylor Fibre Co., Norristown, Pa.

GYROSCOPES—Rate

AMERICAN GYRO CORP., 1509 Colorado Ave., Santa Monica, Calif. ADV. PG. 624.
 CYROMECHANISMS, INC., Halesite, N. Y. ADV. PG. 442.
 SANDERS ASSOCIATES, Nashua, N. H. ADV. PG. 504.

HAND TOOLS

See Tools—Hand or Mechanical

HARNESSES—Wire

See Also Cable Assemblies

Home Electric Heating Co., 1217 Washington St., Boston, Mass.
 EROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 Airborne Electronics Co., Metropolitan Airport Hangar No. 6, Van Nuys, Calif.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Bennett Mfg. Co., Alden, N. Y.
 Bliss Electronic Corp., Box 123, Sussex, N. J.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 Brinnell Company, The, Simsbury, Conn.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cable Electric Products Co., Providence, R. I.
 Cadre Industries Corp., Box 117, 19 Delaware Ave., Endicott, N. Y.
 CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
 CHERRY-CHANNER CORP., 1488 Skokie Blvd., Highland Park, Ill. ADV. PG. 422, 593.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 DALE PRODUCTS, INC., Box 1, Columbus, Nebr. ADV. PG. 342, 343.
 DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
 Eastern Specialty Co., Philadelphia 40, Pa.
 Elco Corporation, 190 W. Glenwood Ave., Philadelphia 40, Pa.
 Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 GENERAL ELECTRIC CO., WIRING DEVICE DEPT., Providence 7, R. I. ADV. PG. 496.
 GENERAL ELECTRONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 568.
 GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 608.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Hindle Transformer Co., Inc., Flemington, N. J.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Jowit Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
 MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.
 Modelcrite Products Corp., 1500 Bangs Ave., Asbury Park, N. J.
 ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 569.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw St., Los Angeles 8, Calif.
 PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 614.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
 Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
 Scientific Assembly Co., 65 Hope St., Brooklyn 11, N. Y.
 Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Telectronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 UNITED MFG. & SERVICE CO., 405 S. Sixth St., Milwaukee 4, Wis. ADV. PG. 266.
 U. S. COMPONENTS, INC., 454 E. 148th St., New York 55, N. Y. ADV. PG. 313.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

HEADPHONES & HEADSETS

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Cannon Co., C. F., Springwater, N. Y.
 CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Dyna Labs., Inc., 1075 Stewart Ave., Garden City, N. Y.
 Electro, Inc., Delaware, Ohio.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw St., Los Angeles 8, Calif.
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
 ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 228, 302.
 Roftan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.

Telex, Inc., Telex Park, St. Paul 1, Minn.
 TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 600.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

HEADS—Recording

Audak Co., 500 Fifth Ave., New York, N. Y.
 Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
 CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
 Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.
 Cook Laboratories, Inc., R-2, Stamford, Conn.
 Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
 DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
 Duotone Co., Inc., Keyport, N. J.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
 Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
 Lipps, E. A., 5485 W. Washington Blvd., Los Angeles, Calif.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 271.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 United Pressed Products Co., 741 W. Harrison St., Chicago 7, Ill.

HEADS—Wire & Tape Recording

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
 Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
 Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
 Melpar, Inc., 452 Swann Ave., Alexandria, Va.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, Ill. ADV. PG. 210.
 Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.

HEARING AID TUBES

See Tubes—Hearing Aid

HEARING AIDS

Astatic Corporation, The, Conneaut, Ohio.
 Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Beltone Hearing Aid Co., Beltone Bldg., 1450 W. 19th St., Chicago 8, Ill.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
 Hofmann Corp., C. L., 643 Liberty Ave., Pittsburgh 22, Pa.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 Lauehik Radio Mfg. Co., 3931 Monroe Ave., Wayne, Mich.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, Ill.
 Microtone Co., Ford Parkway on the Mississippi, St. Paul 1, Minn.
 Modern Hearing Aids Laboratory, The, 6805 Fraser St., Vancouver, B. C., Canada.
 Myers & Sons, Inc., E. A., 306 Beverly Road, Radloear Building, Pittsburgh 16, Pa.
 Paravox, Inc., 2056 E. Fourth St., Cleveland 15, Ohio.
 PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 566.
 Rochester Acoustical Laboratories, Inc., Rochester, Minn.
 Sonotone Corp., Saw Mill River Road, P. O. Box 200, Elmsford, N. Y.
 Telex, Inc., Telex Park, St. Paul 1, Minn.
 TRIMM INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 600.

HEATING, ELECTRONIC—Accessories and Associated Equipment

Airtronics Mfg. Co., 5145 W. San Fernando Rd., Los Angeles 39, Calif.

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BCWSER TECHNICAL REFRIGERATION DIV., BOWSER, INC., Terryville, Conn. ADV. PG. 366, 367.
Columbia Resistors, Inc., 216 Lafayette St., New York 12, N. Y.
Electronic Processes Corp., 1021 San Antonio Road, Los Altos, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.
Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 464.
Peeco Corp., 2760 Whittier Blvd., Los Angeles 23, Calif.
Radio Frequency Co., 44 Park St., Medfield, Mass.
Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.
Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.
Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

HEATING, ELECTRONIC—Dielectric

Airtronics Mfg. Co., 5145 W. San Fernando Rd., Los Angeles 39, Calif.
Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Electronic Processes Corp., 1021 San Antonio Road, Los Altos, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Girdler Corp., Thermex Div., 224 E. Broadway, Louisville 1, Ky.
Haydu Brothers, Plainfield, N. J.
Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.
Mytron Mfg. Co., 4504 Brazil St., Los Angeles 39, Calif.
Peeco Corp., 2760 Whittier Blvd., Los Angeles 23, Calif.
Radio Frequency Co., 44 Park St., Medfield, Mass.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 434, 435.
Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.
Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
"S" Corrugated Quenched Gap Co., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J.
Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.

HEATING, ELECTRONIC—Induction

Airmec Ltd., High Wycombe, Buckinghamshire, England.
Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Columbia Resistors, Inc., 216 Lafayette St., New York 12, N. Y.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Haydu Brothers, Plainfield, N. J.
Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.
Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 614.
Radio Frequency Co., 44 Park St., Medfield, Mass.
Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.
Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
"S" Corrugated Quenched Gap Co., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J.
Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Stewart-Speller Associates, Soquel, Calif.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.

HEMOGLOBINOMETERS—Electronic

Photovolt Corp., 95 Madison Ave., New York 16, N. Y.

HOLDERS—Crystal

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keele Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. ADV. PG. 125.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Diamond Mfg. Corp., 7 North Ave., Wakefield, Mass.
ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 7, N. J. ADV. PG. 135.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
GOMBO CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 274.
HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark 7, N. J. ADV. PG. 235.
Industrial Products Co., Danbury, Conn.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Keystone Electronics Corp., 423 Broome St., New York 13, N. Y.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NATIONAL CO. INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.
Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
Pfeffer Products, 3901 W. 54th St., Los Angeles, Calif.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 426.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 545.
SEALTRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.

HORNS—Microwave

See Microwave Accessories

HORNS—Speaker Projector

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
Dilks Co., The, Seymour, Conn.
Hawley Products Co., St. Charles, Ill.
Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.
Les, Via Bergamo 21, Milan, Italy.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
Stromberg-Carlson Co., Rochester 3, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.

HOUSINGS—Antenna

Bennett Mfg. Co., Alden, N. Y.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
Gates Radio Co., Quincy, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Keller Products Co., 41 Union St., Manchester, N. H.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

HOUSINGS—Automobile Radio

Bennett Mfg. Co., Alden, N. Y.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

HOUSINGS—Instrument

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cedar Ave., Brooklyn 14, N. Y. ADV. PG. 414.
B & M METAL PRODUCTS CORP., 14 Factory Cedar Grove, N. J. ADV. PG. 506.
Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
Bennett Mfg. Co., Alden, N. Y.
BERKSHIRE LABORATORIES, 580 Beaver Pond Lincoln, Mass. ADV. PG. 562.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CHURCHILL CORP., 844 Franklin St., Melrose Mass. ADV. PG. 446.
Cole Instrument Co., 1320 S. Grand Ave., Dept. Los Angeles 15, Calif.
Columbia Metal Box Co., 260 E. 143rd St., York, N. Y.
Corry-Jamestown Mfg. Co., Corry, Pa.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
Falstrom Co., 44 Falstrom Court, Passaic, N. J.
Felsenthal & Sons, Inc., G., 4100 W. Grand Chicago 51, Ill.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 369.
Keller Products Co., 41 Union St., Manchester, Conn.
Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
Minute Man Products, Inc., 430 E. 102nd St., York, N. Y.
MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 416.
OLYMPIC METAL PRODUCTS CO., INC., Phillipsburg, N. J. ADV. PG. 168.
PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 160.
Riester & Thesmacher Co., Cleveland 13, Ohio.
ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 426.
Scientific Wood Cabinet Co., 88 Holmes St., Belleville, N. J.
Stolper Steel Products Co., 308 Pilgrim Rd., Meronee Falls, Wis.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 262.
Wright Hepp Associates, Inc., 138 West St., S Hackensack, N. J.

HOUSINGS—Plug-In

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
Bennett Mfg. Co., Alden, N. Y.
BERKSHIRE LABORATORIES, 580 Beaver Pond Lincoln, Mass. ADV. PG. 562.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Vernon, N. Y. ADV. PG. 260.
Cole Instrument Co., 1320 S. Grand Ave., Dept. Los Angeles 15, Calif.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. A. PG. 498.
ELECTRO-SEAL CORP., 946 North Ave., Des Plaines, Ill. ADV. PG. 40.
Gates Radio Co., Quincy, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 426.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

HOUSINGS—Public Address System

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
Bennett Mfg. Co., Alden, N. Y.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
Hawley Products Co., St. Charles, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Stromberg-Carlson Co., Rochester 3, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 262.
Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.

HOUSINGS—Speaker

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Bennett Mfg. Co., Alden, N. Y.
 Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.
 Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Lansing Sound, Inc., James B., 2438 Fletcher Drive, Los Angeles 26, Calif.
 McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
 R-J Audio Products, Inc., 164 Duane St., New York 13, N. Y.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.
UTAH RADIO PRODUCTS CO., INC., 1123 E. Franklin St., Huntington, Ind. ADV. PG. 490.

HUMIDITY

See Indicators

HYBRID JUNCTIONS—Microwave

See Microwave Accessories

IGNITION SYSTEMS—Electronic

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 McCormick-Selph Associates, Palo Alto Airport, Palo Alto, Calif.
SCINTILLA MAGNETO DIV., BENDIX AVIATION CORP., Sidney, N. Y. ADV. PG. 131.
 Tensor Electric Development Co., Inc., 343 Classon Ave., Brooklyn 5, N. Y.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
 Whitaker Cable Corp., Kansas City 16, Mo.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

IGNITRON

See Tubes

ILLUMINATION CONTROLS

See Controls, Illumination

IMPEDANCE

See Detectors

IMPREGNATING COMPOUNDS

See Insulating Compounds

IMPREGNATING MACHINES

See Machines

INDICATORS—Antenna Position

Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 576.

INDICATORS—Arc Back

Continental Electronic Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.

INDICATORS—Broadcast Volume

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

INDICATORS—Capacitor Leakage

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Barnes Development Co., Lansdowne, Pa.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. ADV. PG. 524.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

INDICATORS—Density

See Indicators, Specific Gravity

INDICATORS—Detonation Indicators & Meters

Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 288.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.

INDICATORS—Dew Point

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Illinois Testing Labs., Inc., 420 N. La Salle St., Chicago 10, Ill.
 Thermo Instruments Co., Box 336, Belmont, Calif.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

INDICATORS—Dielectric Constant

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

INDICATORS—Film Thickness

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
 Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, Ill.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.

INDICATORS—Fluid Conductivity

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Foxboro Co., The, Foxboro, Mass.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.
 Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

INDICATORS—Fluid Flow, Electronic

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
DETECTOR CO., 5631 Cahuenga Blvd., North Hollywood, Calif.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
OSTER MFG. CO., JOHN, 1 Main St., Racine, Wis. ADV. PG. 494.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

INDICATORS—Frequency

Airmec Ltd., High Wycombe, Buckinghamshire, England.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 Detector Co., 5631 Cahuenga Blvd., North Hollywood, Calif.
 Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 415.
 Filters, Inc., Electroquipt Controls Div., 30 Sagamore Hill Drive, Port Washington, N. Y.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

INDICATORS—Hardness

Barber-Colman Co., Rockford, Ill.
 Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, Ill

INDICATORS—Humidity, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 General Mills, Inc., Mechanical Div., 1620 Central Ave., Minneapolis 13, Minn.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Thermo Instruments Co., Box 336, Belmont, Calif.

INDICATORS—Illumination

BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 61.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Hetherington, Inc., Sharon Hill, Pa.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

INDICATORS—Liquid Level, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
Fischer Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.
Foxboro Co., The, Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
Thermo Instruments Co., Box 336, Belmont, Calif.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
Vapor Recovery Systems Co., 2820 N. Alameda, Compton, Calif.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

INDICATORS—Materials Thickness

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
Dice Co., J. W., Englewood, N. J.
Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
Magnaflex Corp., 5900 Northwest Hwy., Chicago 31, Ill.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.

Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
Scherr Co., Inc., 200 Lafayette St., New York 12, N. Y.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
Tracerlab, Inc., 130 High St., Boston 10, Mass.

INDICATORS—Moisture, Electronic

BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
Canadian Aviation Electronics, Ltd., 8280 St. Lawrence Blvd., Montreal 14, P. Q., Canada.
Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. ADV. PG. 524.
Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
Foxboro Co., The, Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Hart Moisture Gauges, Inc., 126 Liberty St., New York 6, N. Y.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Tech Laboratories Inc., Bergen & Edsall Bldvs., Palisades Park, N. J.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

INDICATORS—Null

AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Ore.
Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
Industrial Transformer Co., Goulsboro, Pa.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
Macdonald Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
Tech Laboratories, Inc., Bergen & Edsall Bldvs., Palisades Park, N. J.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

INDICATORS—Null-Balance, Potentiometer Type

Gavco Corp. Sub. of General Aviation Corp., 540 E. 80th St., New York 21, N. Y.

INDICATORS—Ocean Depth

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
Edo Corp., College Point, N. Y.
Northeastern Engineering Inc., Manchester, N. H.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.

INDICATORS—Oxygen

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Baker Co., Inc., 113 Astor St., Newark 5, N. J.

Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

INDICATORS—pH

Analytical Measurements, Inc., 585 Main St., Chatham, N. J.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
Central Scientific Co., 1700 Irving Park Rd., Chicago 11, Ill.
Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.
Foxboro Co., The, Foxboro, Mass.
La Motte Chemical Products Co., Towson 4, Baltimore 47, Md.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
Menlo Research Laboratory, Menlo Park, Calif.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

INDICATORS—Photographic Exposure

BURKE & JAMES INC., 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 418.
Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. Y. ADV. PG. 350.

INDICATORS—Positioning

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 10, Wis.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
Bristol Co., The, Waterbury 20, Conn.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
EDCLIFF INSTRUMENTS, 383 N. Foothill Blvd., Pasadena 8, Calif. ADV. PG. 589.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 288.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.
Gorrell & Gorrell, Hawthorth, N. J.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 86, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

INDICATORS—Power Level, Electronic

Burlington Instrument Co., Burlington, Iowa.

C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Gates Radio Co., Quincy, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

INDICATORS—Pressure

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 BOURNS LABORATORIES, 6136 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
 Bristol Co., The, Waterbury 20, Conn.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Dillon & Co., Inc., W.C., 14620 Keswick St., Van Nuys, Calif.
 ECLIPSE PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 288.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Giannini & Co., Inc., G.M., Bin N., Pasadena, Calif.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
 GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Clifton Mfg. Corp., Metuchen, N. J.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
 Rütishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

INDICATORS—Radiation

See Counters, Geiger

INDICATORS—Pulse Time Riser

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.

INDICATORS—Recording Engine

Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
 Standard Telephone & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

INDICATORS—rf Probe

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 Javex, P.O. Box 646, Redlands, Calif.
 MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
 Network Mfg. Co., 213 W. Fifth St., Bayonne, N. J.

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

INDICATORS—Shorted Turn

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 KARTRON, INC., Drawer 472, Huntington Beach, Calif. ADV. PG. 628.

INDICATORS—Smoke & Combustion, Electronic

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
 VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.
 WATERS MANUFACTURING, INC., 4 Gordon St., Waltham 54, Mass. ADV. PG. 484.
 Worner Electronic Devices, Rankin, Ill.

INDICATORS—Sound Level

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Gates Radio Co., Quincy, Ill.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
 Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

INDICATORS—Specific Gravity

Bristol Co., The, Waterbury 20, Conn.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

INDICATORS—Strain

Anderson, Arthur R., 517 North I St., Tacoma 3, Wash.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Dillon & Co., Inc., W. C. 14620 Keswick St., Van Nuys, Calif.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 ELECTRONIC TUBE CORP., 1800 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
 Foxboro Co., The, Foxboro, Mass.
 Foxboro Co., The, Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, Ill.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

INDICATORS—Temperature

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.
 BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bristol Co., The, Waterbury 20, Conn.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Dillon & Co., Inc., W. C. 14620 Keswick St., Van Nuys, Calif.
 Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
 EDISON, INC., THOMAS A., INSTRUMENT DIV., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 300, 301.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Giannini & Co., Inc., G. M., Bin N., Pasadena, Calif.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Taco West Corp., 525 N. Noble St., Chicago 22, Ill.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

INDICATORS—Timing

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 BRISTOL MOTOR DIVISION, VOCALINE COMPANY OF AMERICA, INC., Old Saybrook, Conn. ADV. PG. 279.
 CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
 Detectron Co., 5631 Cahuena Blvd., North Hollywood, Calif.
 ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 288.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury 20, Conn. ADV. PG. 477.
 HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. ADV. PG. 208, 209.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.
 Pantex Co., Box 16945, West Branch, Los Angeles 46, Calif.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
 SESSIONS CLOCK CO., Forestville, Conn. ADV. PG. 459.
 STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 410.
 VECTOR, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Weltron Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

INDICATORS—Torque

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 ECLIPSE PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
 Foxboro Co., The, Foxboro, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.

INDICATORS—Turbidity

Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.

INDICATORS—Vacuum

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 BOUBINS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
 Bristol Co., The, Waterbury 20, Conn.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Consolidated Vacuum Corp., 735 Ridge Rd., W., Rochester 3, N. Y.
 Continental Electric Co., Geneva, Ill.
 ECLIPSE PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Manning Maxwell & Moore, Inc., Stratford, Conn.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Scientific Specialties Corp., Snow & Union Sts., Brighton 35, Mass.
 Stewart-Speller Associates, Soquel, Calif.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

INDICATORS—Volume

AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. ADV. PG. 360.

Bristol Co., The, Waterbury 20, Conn.
 Gates Radio Co., Quincy, Ill.
 KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.

INDICATORS—Weight

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Dillon & Co., Inc., W. C., 14620 Keswick St., Van Nuys, Calif.
 Foxboro Co., The, Foxboro, Mass.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

INDICATORS—Wind Direction—Electronic

Aeronautical Communications Equipment, Inc., 3090 Douglas Road, Miami 33, Fla.
 Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.

INDICATORS—Wind Speed—Electronic

Aeronautical Communications Equipment, Inc., 3090 Douglas Road, Miami 33, Fla.
 Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.

INDUCTANCE ASSEMBLIES

A.P.W. Co., 72 W. Main St., Rockaway, N. J.
 ACE COIL & ELECTRONICS CO., 914 Middlesex Ave., Metuchen, N. J. ADV. PG. 402.
 Acme Wire Co., New Haven 14, Conn.
 AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
 AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
 Alpha Electronics, Inc., Route 17, Ramsey, N. J.
 American Relay & Controls Inc., 4901 W. Flournoy St., Chicago 44, Ill.
 Atlas Coil Winders, Inc., 39 Manhattan St., Stamford, Conn.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 Best Mfg. Co., 1200 Grove St., Irvington 11, N. J.
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.
 BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 129.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 215.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
 Carad Corp., 93 Leiland Ave., San Francisco 28, Calif.
 CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
 CENTRONICS CO., 21-04 122 St., College Point, N. Y. ADV. PG. 607.
 CITATION PRODUCTS CO., 233 E. 146th St., York 51, N. Y. ADV. PG. 618.
 Clippard Instrument Laboratory, Inc., 7390 Colburn Ave., Cincinnati 24, Ohio.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 111, Ill. ADV. PG. 601.
 CONNECTICUT TELEPHONE & ELECTRIC CORP., Britannia St., Meriden, Conn. ADV. PG. 590.
 Consolidated Radio Products Co., 350 W. Erie Chicago 10, Ill.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Custom Electronics Corp., Morris Plains, N. J.
 Cycle Electronics Laboratories, 356 Glenwood Ave., Orange, N. J.
 Deico Radio Div., General Motors Corp., Kokomo, Ind.
 DeWitt Development Co., 12545 S. 69th Ave., Ft. Heights, Ill.
 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
 EASTERN PRECISION RESISTOR CORP., 130-11 111th Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
 Ecco High Frequency Corp., 7020 Hudson Blvd., New Bergen, N. J.
 EISLER ENGINEERING CO., INC., 740 S. 13th Newark 3, N. J. ADV. PG. 332.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
 ELECTRONIC COILS, INC., Box 1641, 44 Taylor Springfield, Mass. ADV. PG. 570.
 ELECTRONIC TRANSFORMER CO., INC., 207 W. 72nd St., New York, N. Y. ADV. PG. 428.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 111, Ill.
 EMPIRE COIL CO., INC., Beechwood Ave. & Second New Rochelle, N. Y. ADV. PG. 480.
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
 FEDERAL TELEPHONE & RADIO CORP., 88 Kingsford Rd., Clifton, N. J. ADV. PG. 148-153.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, York 20, N. Y. ADV. PG. 225.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
 FUGLE-MILLER LABORATORIES, INC., 398 Main Metuchen, N. J. ADV. PG. 554.
 GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
 HIGHLAND ENGINEERING CO., Main St. & Urban Westbury, N. Y. ADV. PG. 568.
 HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 596.
 Hinde Transformer Co., Inc., Flemington, N. J.
 HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 443.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 Industrial Transformer Co., Gouldsboro, Pa.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Island City, N. Y. ADV. PG. 535.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 K-V Transformer Corp., Danbury, Conn.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 LEONARD ELECTRIC PRODUCTS CO., INC., 67 Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
 Magnetic Windings Div., Essex Wire Corp., Freeman St. Ave. at Hobson Blvd., Easton, Pa.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Master Appliance Mfg. Co., Fourth & Ontario St. Racine, Wis.
 May Co., Donald M., 6055 Lankershim Blvd., New Hollywood, Calif.
 MEPCO, INC., 35-37 Abnett Ave., Morristown, N. J. ADV. PG. 98, 99.
 Milten Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 31, Calif.
 Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.
 NATIONAL COIL CO., P.O. Box 1237, Sheridan, Wyo.
 NATIONAL CO., INC., 61 Sherman St., Malden, Mass. ADV. PG. 232, 233.
 North Hills Electric Co., Inc., Box 427, Great Neck, N. Y.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson, N. J. ADV. PG. 514.
 OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.
 P C A ELECTRONICS INC., 2180 Colorado Ave., San Monica, Calif. ADV. PG. 580, 581.
 Penn Tran Corp., Bellefonte, Pa.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
 PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Polytron Corp., 47 Martine Ave., White Plains, N. Y.
 Power Conversions, 2635 W. Grand Ave., Chicago 111, Ill.
 Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.

- acorn Electric Co., 52 E. 19th St., New York 3, N. Y.
 Railway Communications, Inc., Smith Rd. & Glenwood,
 Raytown, Mo.
 Ray Electronics, Inc., S. Buckout St., Irvington, N. Y.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham
 54, Mass. ADV. PG. 420.
 REDMAN ELECTRONICS CORP., P. O. Box 72, Thomp-
 sonville, Conn. ADV. PG. 615.
 Reliance Electric Co., 8020 S. Park Ave., Chicago 19,
 Ill.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
 SICKLES, F. W., DIV. GENERAL INSTRUMENT CORP.,
 165 Front St., Chicopee, Mass. ADV. PG. 357.
 Square Root Mfg. Corp., 391 Saw Mill River Rd.,
 Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd.,
 Chicago 39, Ill.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London W.C. 2, England.
 Standard Winding Corp., 44-62 Johnes St., Newburgh,
 N. Y.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Summit Coil Co., 67 Union Pl., Summit, N. J.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Tantal Electronics, Inc., 2979 N. Ontario St., Burbank,
 Calif.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
 ADV. PG. 562.
 Teledyne Industries Corp., 35-18 37th St., Long Island
 City 1, N. Y.
 Teledradio Engineering Corp., 99 Wall St., New York
 5, N. Y.
 Television Laboratories, Inc., 5045 W. Lake St., Chicago
 44, Ill.
 Thor Transformer & Electronics Co., 750 San Antonio
 Rd., Palo Alto, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa.
 ADV. PG. 546.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 TRESKO, 3824 Terrace St., Philadelphia 28, Pa. ADV.
 PG. 520.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
 S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
 N. J. ADV. PG. 488.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 West Coast Electronics Co., 5873 W. Jefferson Blvd.,
 Los Angeles 16, Calif.
 Western Coil Products Co., 2993 Middlefield Rd., Palo
 Alto, Calif.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.
 WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
 St., Waterbury 91, Conn. ADV. PG. 346.
 White Industries, Inc., 421 W. 54th St., New York 19,
 N. Y.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.
- CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd.,
 Chicago, Ill. ADV. PG. 577.
 CENTRONICS CO., 21-04 122 St., College Point, N. Y.
 ADV. PG. 607.
 Circuitron, Inc., 400 Ninth St., Hoboken, N. J.
 CITATION PRODUCTS CO., 233 E. 146th St., New York
 51, N. Y. ADV. PG. 618.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave.,
 Cincinnati 24, Ohio.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41,
 Ill. ADV. PG. 601.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los
 Angeles 15, Calif.
 COMAR ELECTRIC CO., 3349 W. Addison St., Chicago
 18, Ill. ADV. PG. 494.
 COMMUNICATION ACCESSORIES CO., Box 7, 110th St.
 & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
 CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
 Britannia St., Meriden, Conn. ADV. PG. 590.
 Consolidated Radio Products Co., 350 W. Erie St.,
 Chicago 10, Ill.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd.,
 Rockaway Beach 93, N. Y.
 Custom Electronics Corp., Morris Plains, N. J.
 Cycle Electronics Laboratories, 356 Glenwood Ave., East
 Orange, N. J.
 DX RADIO PRODUCTS CO., INC., 2300 W. Armitage
 Ave., Chicago 47, Ill. ADV. PG. 509.
 DANO ELECTRIC CO., Main St., Winsted, Conn. ADV.
 PG. 542.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Deluxe Coils, Inc., Wabash, Ind.
 DeWitt Development Co., 12545 S. 69th Ave., Palos
 Heights, Ill.
 DIEZ DESIGN & MFG. CO., Grandview 6, Mo. ADV.
 PG. 498.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chi-
 cago 14, Ill.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 EASTERN PRECISION RESISTOR CORP., 130-11 90
 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
 Ecco High Frequency Corp., 7020 Hudson Blvd., North
 Bergen, N. J.
 EISLER ENGINEERING CO., INC., 740 S. 13th St.,
 Newark 3, N. J. ADV. PG. 332.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chi-
 cago 39, Ill.
 Electronic Transformer Co., Westerly Rd., Ossining, N. Y.
 ELECTRONIC COILS, INC., P. O. Box 1641, 44 Taylor
 St., Springfield, Mass. ADV. PG. 570.
 ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th
 St., New York, N. Y. ADV. PG. 428.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30,
 Ill.
 EMPIRE COIL CO., INC., Beechwood Ave. & Second St.,
 New Rochelle, N. Y. ADV. PG. 480.
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn
 17, N. Y. ADV. PG. 486.
 FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland
 Rd., Clifton, N. J. ADV. PG. 148-153.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New
 York 20, N. Y. ADV. PG. 225.
 Filters, Inc., Electroquipt Controls Div., 30 Sagamore
 Hill Drive, Port Washington, N. Y.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
 FRED TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 554.
 FUGLE-MILLER LABORATORIES, INC., 398 Main St.,
 Metuchen, N. J. ADV. PG. 554.
 Geotronic Labs., Inc., Dallas 11, Texas.
 GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St.,
 Burbank, Calif. ADV. PG. 618.
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago
 39, Ill.
 GUTHMAN INC., Edwin I., 15 S. Throop St., Chicago,
 Ill. ADV. PG. 414.
 HIGHLAND ENGINEERING CO., Main St. & Urban
 Ave., Westbury, N. Y. ADV. PG. 568.
 HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau
 Ave., Brooklyn 22, N. Y. ADV. PG. 596.
 Hindle Transformer Co., Inc., Flemington, N. J.
 HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave.,
 Chicago 25, Ill. ADV. PG. 443.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn
 2, N. Y.
 Industrial Television, Inc., 359 Lexington Ave., Clifton,
 N. J.
 Industrial Transformer Co., Gouldsboro, Pa.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long
 Island City, N. Y. ADV. PG. 535.
 Jersey Specialty Co., Little Falls, N. J.
 Jowif Electronics Inc., 7945 Germantown Ave., Phila-
 delphia 18, Pa.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 K-V Transformer Corp., Danbury, Conn.
 KENYON TRANSFORMER CO., INC., 840 Barry St.,
 New York 59, N. Y. ADV. PG. 272.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y.
 ADV. PG. 324.
 LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty
 Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
 Magnetic Windings Div., Essex Wire Corp., Fremans-
 burg Ave., at Hobson Blvd., Easton, Pa.
 Master Appliance Mfg. Co., Fourth & Ontario Sts.,
 Racine, Wis.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica,
 N. Y.
- May Co., Donald M., 6055 Lankershim Blvd., North
 Hollywood, Calif.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt.
 Carmel, Ill.
 MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J.
 ADV. PG. 98, 99.
 Mid-West Coil & Transformer Co., 1642 N. Halstead
 St., Chicago 14, Ill.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3,
 Calif.
 Naer Corp., 11777 Santa Monica Blvd., West Los
 Angeles 25, Calif.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
 NATIONAL CO., INC., 61 Sherman St., Malden 48,
 Mass. ADV. PG. 232, 233.
 North Hills Electric Co., Inc., Box 427, Great Neck,
 N. Y.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2,
 N. J. ADV. PG. 514.
 OXFORD ELECTRIC CORP., 3911 S. Michigan Ave.,
 Chicago 15, Ill. ADV. PG. 602.
 P C A ELECTRONICS INC., 2180 Colorado Ave., Santa
 Monica, Calif. ADV. PG. 580, 581.
 Penn Tran Corp., Bellefonte, Pa.
 Philmore Mfg. Co., Inc., 113 University Place, New
 York 3, N. Y.
 PICKERING & CO., 309 Woods Ave., Oceanside, N. Y.
 ADV. PG. 160.
 Polytron Corp., 47 Martine Ave., White Plains, N. Y.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.
 Presto Electric Co., Inc., 600 Fulton St., Elizabeth,
 N. J.
 Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
 Radionic Transformer Co., 411 S. Sangamon St., Chicago
 7, Ill.
 Railway Communications, Inc., Smith Rd. & Glenwood,
 Raytown, Mo.
 Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I.
 Ravoar, Inc., 7800 W. Addison St., Chicago, Ill.
 REDMAN ELECTRONICS CORP., P. O. Box 72, Thomp-
 sonville, Conn. ADV. PG. 615.
 Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
 Scientific Assembly Co., 65 Hope St., Brooklyn 11, N. Y.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
 Pa. ADV. PG. 35.
 SICKLES, F. W., DIV. GENERAL INSTRUMENT CORP.,
 165 Front St., Chicopee, Mass. ADV. PG. 357.
 Square Root Mfg. Corp., 391 Saw Mill River Rd.,
 Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd.,
 Chicago 39, Ill.
 Standard Winding Corp., 44-62 Johnes St., Newburgh,
 N. Y.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Summit Coil Co., 67 Union Pl., Summit, N. J.
 Suer Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 T V Products Corp., 907 E. 23rd St., Paterson, N. J.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
 ADV. PG. 562.
 Teledradio Engineering Corp., 99 Wall St., New York 5,
 N. Y.
 TEL-RAD MFG. CO., INC., 7th & Madison St., Fennimore,
 Wis. ADV. PG. 620.
 Thor Transformer & Electronics Co., 750 San Antonio
 Rd., Palo Alto, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave.,
 Newark 5, N. J. ADV. PG. 583.
 TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa.
 ADV. PG. 546.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 TRESKO, 3824 Terrace St., Philadelphia 28, Pa. ADV.
 PG. 520.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
 UNION ELECTRIC PRODUCTS CO., 24 Edison Pl.,
 Newark 2, N. J. ADV. PG. 414.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
 N. J. ADV. PG. 488.
 UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside,
 N. J. ADV. PG. 606, 607.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 West Coast Electronics Co., 5873 W. Jefferson Blvd.,
 Los Angeles 16, Calif.
 Western Coil Products Co., 2993 Middlefield Rd., Palo
 Alto, Calif.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.
 WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
 St., Waterbury 91, Conn. ADV. PG. 346.
 White Industries, Inc., 421 W. 54th St., New York 19,
 N. Y.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.
- INDUCTANCE WINDINGS
- P.W. Co., 72 W. Main St., Rockaway, N. J.
 ACE COIL & ELECTRONICS CO., 914 Middlesex Ave.,
 Metuchen, N. J. ADV. PG. 402.
 Acme Wire Co., New Haven 14, Conn.
 Aero Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
 AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV.
 PG. 587.
 AEROLITE ELECTRONICS CORP., 507 26th St., Union
 City, N. J. ADV. PG. 585.
 ALGAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair
 Lawn, N. J. ADV. PG. 515.
 ALLIED CONTROL CO., INC., 2 East End Ave., New
 York 21, N. Y. ADV. PG. 194, 195.
 Allied Mfg. Corp., 605-07 61st St., West New York,
 N. J.
 Alpha Electronics, Inc., Route 17, Ramsey, N. J.
 American Relay & Controls Inc., 4901 W. Flournoy St.,
 Chicago 44, Ill.
 Arco Transformer & Electric Co., 1602 S. Hanna St.,
 Fort Wayne, Ind.
 Associated Production Co., 162 N. Clinton St., Chi-
 cago 6, Ill.
 Atlas Coil Winders, Inc., 39 Manhattan St., Stamford,
 Conn.
 ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury,
 Mass. ADV. PG. 558.
 A-T Mfg. Corp., 38 N. Second Ave., Mt. Vernon, N. Y.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 Best Mfg. Co., 1200 Grove St., Irvington 11, N. J.
 Birdsall Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto,
 Calif.
 BOND ELECTRONICS CORP., 60 Springfield Ave.,
 Springfield, N. J. ADV. PG. 129.
 BORG EQUIPMENT DIVISION, THE GEORGE W. BORG
 CORP., Janesville, Wis. ADV. PG. 368.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola,
 N. Y.
 Calbest Engineering & Electronics Co., 828 N. Highland
 Ave., Hollywood 37, Calif.
 CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,
 Cambridge 38, Mass. ADV. PG. 76.
 Carad Corp., 93 Leiland Ave., San Francisco 28, Calif.
 CELCO CONSTANTINE ENGINEERING LABORATORIES
 CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
- INDUCTANCES—Antenna
- ACE COIL & ELECTRONICS CO., 914 Middlesex Ave.,
 Metuchen, N. J. ADV. PG. 402.
 AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV.
 PG. 587.
 Alpha Electronics, Inc., Route 17, Ramsey, N. J.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.

- Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
- CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
- Carad Corp., 93 Leiland Ave., San Francisco 28, Calif.
- Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
- CENTRONICS CO., 21-04 122 St., College Point, N. Y. ADV. PG. 607.
- Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
- COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, Ill. ADV. PG. 601.
- Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
- Delco Radio Div., General Motors Corp., Kokomo, Ind.
- DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
- Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
- EASTERN PRECISION RESISTOR CORP., 130-11 90 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
- Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
- Essex Electronics, Berkeley Heights, N. J.
- FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 554.
- Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.
- GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
- Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
- HEPPNER MFG. CO., P. O. Box 612, Round Lake, Ill. ADV. PG. 243.
- HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 596.
- HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 443.
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
- Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
- LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
- LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
- Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
- Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
- Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
- Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
- National Coil Co., P. O. Box 1237, Sheridan, Wyo.
- Polytron Corp., 47 Martine Ave., White Plains, N. Y.
- Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.
- Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
- REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 615.
- Roffan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
- Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
- SICKLES, F. W., DIV. GENERAL INSTRUMENT CO., 165 Front St., Chicopee, Mass. ADV. PG. 357.
- Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
- Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
- Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.
- Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
- Summit Coil Co., 67 Union Pl., Summit, N. J.
- Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
- Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
- TEL-RAD MFG. CO., INC., 7th & Madison St., Fennimore, Wis. ADV. PG. 620.
- Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
- Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
- U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
- Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
- White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
- ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 558.
- B-T Mfg. Corp., 38 N. Second Ave., Mt. Vernon, N. Y.
- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
- Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
- Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
- Birdsall Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.
- Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
- Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
- CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
- Carad Corp., 93 Leiland Ave., San Francisco 28, Calif.
- Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.
- CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
- CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd., Chicago, Ill. ADV. PG. 577.
- CENTRONICS CO., 21-04 122 St., College Point, N. Y. ADV. PG. 607.
- CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.
- Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.
- Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
- COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, Ill. ADV. PG. 601.
- COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. ADV. PG. 494.
- Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
- Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
- Custom Electronics Corp., Morris Plains, N. J.
- Cycle Electronics Laboratories, 356 Glenwood Ave., East Orange, N. J.
- DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, Ill. ADV. PG. 509.
- DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 542.
- DeLuxe Coils, Inc., Wabash, Ind.
- DeWitt Development Co., 12545 S. 69th Ave., Palos Heights, Ill.
- DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
- Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
- EASTERN PRECISION RESISTOR CORP., 131-11 90 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
- EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
- Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
- Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.
- ELECTRONIC COILS, INC., P. O. Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 570.
- ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
- Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
- EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
- Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
- EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486.
- Essex Electronics, Berkeley Heights, N. J.
- FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
- FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
- FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
- FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 554.
- Geotronic Labs, Inc., Dallas 11, Tex.
- GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 618.
- Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
- Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.
- GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
- Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.
- Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
- HIGHLAND ENGINEERING CO., Main St., & Urban Ave., Westbury, N. Y. ADV. PG. 548.
- HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 596.
- Hindle Transformer Co., Inc., Flemington, N. J.
- HI-Q DIVISION, AERVOX CORP., Seneca Ave., Olean, N. Y. ADV. PG. 202, 203.
- HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 443.
- Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
- Industrial Transformer Co., Gouldsboro, Pa.
- INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
- Jeffers Electronics Div. of Speer Carbon Co., Du Bois, Pa.
- JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
- Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
- K-V Transformer Corp., Danbury, Conn.
- KENYON TRANSFORMER CO., INC., 840 Barry St., York 59, N. Y. ADV. PG. 272.
- Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
- LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
- LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
- Lewis Spring & Mfg. Corp., 2646 W. North Ave., Chicago 47, Ill.
- Magnetic Windings Div., Essex Wire Corp., Freeburg Ave. at Hobson Blvd., Easton, Pa.
- Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
- May Co., Donald M., 6055 Lankershim Blvd., Hollywood, Calif.
- MEPCO, INC., 35-37 Abnett Ave., Morristown, N. J. ADV. PG. 98, 99.
- Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
- Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, Ill.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
- National Coil Co., P. O. Box 1237, Sheridan, Wyo.
- NATIONAL CO., INC., 61 Sherman St., Malden, Mass. ADV. PG. 232, 233.
- North Hills Electric Co., Inc., Box 427, Great Neck, N. Y.
- OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 39, Ill. ADV. PG. 92.
- ORTHO FILTER CORP., 198 Aibion Ave., Paterson, N. J. ADV. PG. 514.
- OXFORD ELECTRIC CORP., 3911 S. Michigan St., Chicago 15, Ill. ADV. PG. 602.
- P C A ELECTRONICS INC., 2180 Colorado Ave., San Monica, Calif. ADV. PG. 580, 581.
- Peerless Electrical Products Div. of Altec Lansing Co., 9356 Santa Monica Blvd., Beverly Hills, Calif.
- PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
- Polytron Corp., 47 Martine Ave., White Plains, N. Y.
- Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.
- Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
- Randall, Inc., Douglas, 102 High St., Westerly, R. I.
- Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
- REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 615.
- Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
- Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
- SHALLCROSS MFG. CO., 10 Jackson Ave., Collingwood, Pa. ADV. PG. 35.
- SICKLES, F. W., DIV. GENERAL INSTRUMENT CO., 165 Front St., Chicopee, Mass. ADV. PG. 357.
- Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
- Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
- Standard Electronics Corp., 289 Emmett St., Newark, N. J.
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
- Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.
- Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
- Summit Coil Co., 67 Union Pl., Summit, N. J.
- Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
- Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
- TEL-RAD MFG. CO., INC., 7th & Madison St., Fennimore, Wis. ADV. PG. 620.
- Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.
- Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
- Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
- TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
- Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
- TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 520.
- TRIAD TRANSFORMER MFG. CO., 4055 Redwood St., Los Angeles, Calif. ADV. PG. 394.
- Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
- UNION ELECTRIC PRODUCTS CO., 24 Edison Pl., Newark 2, N. J. ADV. PG. 414.
- U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
- UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
- Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
- West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
- Western Coil Products Co., 2993 Middlefield Rd., Alto, Calif.
- Weymouth Instrument Co., 1440 Commercial St., Weymouth 89, Mass.
- WHEELER INSULATED WIRE CO., INC., 150 E. Adams St., Waterbury 91, Conn. ADV. PG. 346.
- White Industries, Inc., 421 W. 54th St., New York 19, N. Y.

INDUCTANCES—Choke

- A. P. W. Co., 72 W. Main St., Rockaway, N. J.
- ACE COIL & ELECTRONICS CO., 914 Middlesex Ave., Metuchen, N. J. ADV. PG. 402.
- ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 202, 203.
- Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
- Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
- AEROCOIL, INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
- AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
- Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
- Alpha Electronics, Inc., Route 17, Ramsey, N. J.
- Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind.
- Atlas Coil Winders, Inc., 39 Manhattan St., Stamford, Conn.
- INDUCTANCES—Electronic Heating Inductor
- AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.

Alpha Electronics, Inc., Route 17, Ramsey, N. J.
ARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 239.
 Coil Winders, Inc., 100 New York Ave., Westbury,
 N. Y.
 Dornier Industries, 3418 N. Milwaukee Ave., Chicago
 41, III.
ISLER ENGINEERING CO., INC., 740 S. 13th St.,
 Newark 3, N. J. ADV. PG. 332.
UNION TRANSFORMER CO., INC., 840 Barry St.,
 New York 59, N. Y. ADV. PG. 272.
 High Frequency Labs., Inc., 55th St. & 37th Ave.,
 Woodside 77, N. Y.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3,
 Calif.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, III.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I.
 Revere Electronics, Inc., 609 W. Lake St., Chicago 6, III.
 Sclay Bros., Inc., 4915 W. 67th St., Chicago 38, III.
 Sherman Industrial Electronics Co., Inc., 505 Washing-
 ton Ave., Belleville 9, N. J.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chi-
 cago 39, III.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
S. ELECTRONICS CORP., 276 Warren St., Lynd-
 hurst, N. J. ADV. PG. 488.

INDUCTANCES—Flyback

Arad Corp., 93 Leland Ave., San Francisco 28, Calif.
 Barron Mfg. Co., 415 S. Aberdeen St., Chicago, III.
ELCO CONSTANTINE ENGINEERING LABORATORIES
 CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP.,
 3501 Addison St., Chicago 18, III. ADV. PG. 468.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41,
 III. ADV. PG. 601.
 West Laboratories, Inc., 84-11 Rockaway Beach Blvd.,
 Rockaway Beach 93, N. Y.
MAX RADIO PRODUCTS CO., INC., 2300 Armitage Ave.,
 Chicago 47, III. ADV. PG. 509.
 Dornier Industries, 3418 N. Milwaukee Ave., Chicago
 41, III.
WIRE COIL CO., INC., Beechwood Ave. & Second St.,
 New Rochelle, N. Y. ADV. PG. 480.
WATMAN INC., EDWIN I., 15 S. Throop St., Chicago,
 III. ADV. PG. 414.
SPINNER MFG. CO., P. O. Box 612, Round Lake, III.
 ADV. PG. 243.
MILBURN ELECTRONIC PRODUCTS CO., 55 Nassau
 Ave., Brooklyn 22, N. Y. ADV. PG. 596.
 Snyder Corp., 462 N. Parkside Ave., Chicago 44, III.
 Sognex Corp., 90-28 Van Wyck Expressway, Jamaica,
 N. Y.
 Spirit Coil & Transformer Corp., 4427 N. Clark St.,
 Chicago 40, III.
OXFORD ELECTRIC CORP., 3911 S. Michigan Ave.,
 Chicago 15, III. ADV. PG. 602.
 Todd-Tran Corp., Bellefonte, Pa.
 Power Conversions, 2635 W. Grand Ave., Chicago 12,
 III.
RADIO CORP. OF AMERICA, Tube Dept., Harrison,
 N. J. ADV. PG. 295, Inside Back & Back Covers.
 Raypar Electronics, Inc., S. Buckout St., Irvington, N. Y.
 Raypar, Inc., 7800 W. Addison St., Chicago, III.
EDMAN ELECTRONICS CORP., P. O. Box 72, Thomp-
 sonville, Conn. ADV. PG. 615.
 Sillan Electric Co., 8020 S. Park Ave., Chicago 19, III.
 Sisk Mfg. Co., 2405 Armitage Ave., Chicago 47, III.
CKLES, F. W., DIV. GENERAL INSTRUMENT CORP.,
 165 Front St., Chicopee, Mass. ADV. PG. 357.
BELLMAN TELEVISION CO., INC., 3029 Webster
 Ave., New York 67, N. Y. ADV. PG. 430, 431.
 Square Root Mfg. Corp., 391 Saw Mill River Rd.,
 Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chi-
 cago 39, III.
 Standard Winding Co., 44-62 Johnes St., Newburgh, N. Y.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Super Electric Products Corp., 46 Oliver St., Newark
 1, N. J.
 V Products Corp., 907 E. 23rd St., Paterson, N. J.
 Tech-Master Products Co., 443-5 Broadway, New York
 13, N. Y.
ELECTROME, INC., 88 Merrick Rd., Amityville, N. Y.
 ADV. PG. 562.
 Theradio Engineering Corp., 99 Wall St., New York,
 N. Y.
TEL-RAD MFG. CO., INC., 7th & Madison St., Fenni-
 more, Wis. ADV. PG. 620.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
S. ELECTRONICS CORP., 276 Warren St., Lynd-
 hurst, N. J. ADV. PG. 488.
 Western Coil Products Co., 2993 Middlefield Rd., Palo
 Alto, Calif.

INDUCTANCES—Magnet

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn
 21, N. Y. ADV. PG. 536.
 A. P. W. Co., 72 W. Main St., Rockaway, N. J.
ACE COIL & ELECTRONICS CO., 914 Middlesex Ave.,
 Metuchen, N. J. ADV. PG. 402.
 Acme Wire Co., New Haven 14, Conn.

ALLIED CONTROL CO., INC., 2 East End Ave., New York
 21, N. Y. ADV. PG. 194, 195.
 Allied Mfg. Corp., 605-07 61st St., West New York,
 N. J.
 Alpha Electronics, Inc., Route 17, Ramsey, N. J.
 American Relay & Controls, Inc., 4901 W. Flounoy St.,
 Chicago 44, III.
 Arco Transformer & Electric Co., 1602 S. Hanna St.,
 Fort Wayne, Ind.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01
 Northern Blvd., Corona, N. Y.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury,
 Mass. ADV. PG. 558.
 Automatic Electric Sales Corp., 1033 W. Van Buren St.,
 Chicago 7, III.
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo
 Alto, Calif.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola,
 N. Y.
 Carol Electronics Corp., 141 E. 25th St., New York
 10, N. Y.
CELCO CONSTANTINE ENGINEERING LABORATORIES
 CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd.,
 Chicago, III. ADV. PG. 577.
CENTRONICS CO., 21-04 122 St. College Point, N. Y.
 ADV. PG. 607.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A,
 Los Angeles 15, Calif.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago
 18, III. ADV. PG. 494.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
 Brittonia St., Meriden, Conn. ADV. PG. 590.
 Consolidated Radio Products Co., 350 W. Erie St.,
 Chicago 10, III.
 Coto-Coil Co., Inc., 65 Pavilion Ave., Providence 5, R. I.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1,
 Wis.
 Cycle Electronics Laboratories, 356 Glenwood Ave., East
 Orange, N. J.
DANO ELECTRIC CO., Main St., Winsted, Conn. ADV.
 PG. 542.
 DeLuxe Coils, Inc., Wabash, Ind.
 DeWitt Development Co., 12545 S. 69th Ave., Palos
 Heights, Ill.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV.
 PG. 498.
 Dornier Industries, 3418 N. Milwaukee Ave., Chicago
 41, III.
EASTERN PRECISION RESISTOR CORP., 131-11 90
 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
EISLER ENGINEERING CO., INC., 740 S. 13th St.,
 Newark 3, N. J. ADV. PG. 332.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago
 39, III.
 Electriccoil Transformer Co., Westerly Rd., Ossining, N. Y.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago
 30, III.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St.,
 New Rochelle, N. Y. ADV. PG. 480.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17,
 N. Y. ADV. PG. 486.
 Filtrors, Inc., Electroquipt Controls Div., 30 Sagamore
 Hill Drive, Port Washington, N. Y.
 Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
 Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St.,
 Burbank, Calif. ADV. PG. 618.
 Hindle Transformer Co., Inc., Flemington, N. J.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chi-
 cago 25, III. ADV. PG. 443.
 Industrial Specialties Corp., 323 Atlantic Ave., Brook-
 lyn 2, N. Y.
 Industrial Transformer Co., Gouldsboro, Pa.
 Jobbins Electronic Enterprises, Menlo Park, Calif.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 Magnetic Windings Div., Essex Wire Corp., Freemans-
 burg Ave. at Hobson Blvd., Easton, Pa.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica,
 N. Y.
 Master Appliance Mfg. Co., Fourth & Ontario Sts.,
 Racine, Wis.
MEPCO, INC., 35-37 Abnett Ave., Morristown, N. J.
 ADV. PG. 98, 99.
 Omega Mfg. Co., 40 Hudson St., New York, N. Y.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2,
 N. J. ADV. PG. 514.
OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chi-
 cago 15, III. ADV. PG. 602.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39,
 III. ADV. PG. 516.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, III.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I.
 Raypar, Inc., 7800 W. Addison St., Chicago, III.
 Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, III.
 Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd.,
 Chicago 39, III.
 Super Electric Products Corp., 46 Oliver St., Newark 1,
 N. J.
 Tartak Electronics, Inc., 2979 N. Ontario St., Burbank,
 Calif.
TEL-RAD MFG. CO., INC., 7th & Madison St., Fenni-
 more, Wis. ADV. PG. 620.
 Television Laboratories, Inc., 5045 W. Lake St., Chi-
 cago 44, III.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd,
 Pa. ADV. PG. 546.

Thor Transformer & Electronics Co., 750 San Antonio
 Rd., Palo Alto, Calif.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave.,
 Los Angeles, Calif. ADV. PG. 394.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
UNION ELECTRIC PRODUCTS CO., 24 Edison Pl., New-
 ark 2, N. J. ADV. PG. 414.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
 N. J. ADV. PG. 488.
 Western Coil Products Co., 2993 Middlefield Rd., Palo
 Alto, Calif.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
 St., Waterbury 91, Conn. ADV. PG. 346.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

INDUCTANCES—Metalized Glass

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island
 City 1, N. Y.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Roches-
 ter 3, N. Y.
 Corning Glass Works, Corning, N. Y.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38,
 Station J, Buffalo 8, N. Y. ADV. PG. 566.
 Techron Co., 254-256 Friend St., Boston 14, Mass.

INDUCTANCES—Motor & Generator Field

Acme Wire Co., New Haven 14, Conn.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Atlas Coil Winders, Inc., 39 Manhattan St., Stamford,
 Conn.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury,
 Mass. ADV. PG. 558.
CELCO CONSTANTINE ENGINEERING LABORATORIES
 CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
 DeLuxe Coils, Inc., Wabash, Ind.
 Dornier Industries, 3418 N. Milwaukee Ave., Chicago
 41, III.
EASTERN PRECISION RESISTOR CORP., 130-11 90
 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
EICOR, INC., 1501 W. Congress St., Chicago 7, III.
 ADV. PG. 120.
EISLER ENGINEERING CO., INC., 740 S. 13th St.,
 Newark 3, N. J. ADV. PG. 332.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake
 St., Chicago, III. ADV. PG. 592.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chi-
 cago 25, III. ADV. PG. 443.
 Master Appliance Mfg. Co., Fourth & Ontario Sts.,
 Racine, Wis.
 National Electric Coil Co., Columbus 16, Ohio.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I.
 Rollan Electric Co., 8020 S. Park Ave., Chicago 19, III.
 Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
 Super Electric Products Corp., 46 Oliver St., Newark
 1, N. J.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, III.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
 St., Waterbury 91, Conn. ADV. PG. 346.

INDUCTANCES—Multiple Wound

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn
 21, N. Y. ADV. PG. 536.
 A. P. W. Co., 72 W. Main St., Rockaway, N. J.
ACE COIL & ELECTRONICS CO., 914 Middlesex Ave.,
 Metuchen, N. J. ADV. PG. 402.
 Acme Wire Co., New Haven 14, Conn.
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV.
 PG. 587.
AEROLITE ELECTRONICS CORP., 507 26th St., Union
 City, N. J. ADV. PG. 585.
ALLIED CONTROL CO., INC., 2 East End Ave., New
 York 21, N. Y. ADV. PG. 194, 195.
 Allied Mfg. Corp., 605-07 61st St., West New York,
 N. J.
 Alpha Electronics, Inc., Route 17, Ramsey, N. J.
 American Relay & Controls, Inc., 4901 W. Flounoy St.,
 Chicago 44, III.
 Arco Transformer & Electric Co., 1602 S. Hanna St.,
 Fort Wayne, Ind.
 Atlas Coil Winders, Inc., 39 Manhattan St., Stamford,
 Conn.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury,
 Mass. ADV. PG. 558.
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo
 Alto, Calif.
BOND ELECTRONICS CORP., 60 Springfield Ave., Spring-
 field, N. J. ADV. PG. 129.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
CELCO CONSTANTINE ENGINEERING LABORATORIES
 CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
CENTRONICS CO., 21-04 122 St., College Point, N. Y.
 ADV. PG. 607.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, III.
 ADV. PG. 601.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70
 Brittonia St., Meriden, Conn. ADV. PG. 590.
 Consolidated Radio Products Co., 350 W. Erie St.,
 Chicago 10, III.
 Coto-Coil Co., Inc., 65 Pavilion Ave., Providence 5, R. I.

Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J.
DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 542.
 DeLuxe Coils, Inc., Wabash, Ind.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 Dit-Mco Inc., 729 Baltimore Ave., Kansas City 6, Mo.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 14, Ill.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 554.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 618.
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 568.
 Hindle Transformer Co., Inc., Flemington, N. J.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
 Industrial Transformer Co., Gouldsboro, Pa.
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 Maquet Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, Ill.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.
 Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
 Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I.
REDMAN ELECTRONICS CORP., Box 72, Thompsonville, Conn. ADV. PG. 615.
 Roflan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
 Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
SICKLES, F. W., DIV. GENERAL INSTRUMENT CORP., 165 Front St., Chicopee, Mass. ADV. PG. 357.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
T V Products Corp., 907 E. 23rd St., Paterson, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
TEL-RAD MFG. CO., INC., 7th & Madison St., Fennimore, Wis. ADV. PG. 620.
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 520.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

INDUCTANCES—Pickup

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536.
 A. P. W. Co., 72 W. Main St., Rockaway, N. J.
ACE COIL & ELECTRONICS CO., 914 Middlesex Ave., Metuchen, N. J. ADV. PG. 402.
AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
 Alpha Electronics, Inc., Route 17, Ramsey, N. J.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 129.
CENTRONICS CO., 21-04 122 St., College Point, N. Y. ADV. PG. 607.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 DeWitt Development Co., 12545 S. 69th Ave., Palos Heights, Ill.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
EASTERN PRECISION RESISTOR CORP., 130-11 90 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
ELECTRONIC COILS, INC., Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 570.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
HOUZHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 443.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 160.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.
PRECISION RESISTOR CO., 334 Badger Ave., Newark 8, N. J. ADV. PG. 330.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
REDMAN ELECTRONICS CORP., Box 72, Thompsonville, Conn. ADV. PG. 615.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

INDUCTANCES—Power & a-f Coil Windings

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536.
 Acme Wire Co., New Haven 14, Conn.
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Alpha Electronics, Inc., Route 17, Ramsey, N. J.
 Atlas Coil Winders, Inc., 39 Manhattan St., Stamford, Conn.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Merion, Pa. ADV. PG. 239.
BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. ADV. PG. 129.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Coto-Coil Co., Inc., 65 Pavillion Ave., Providence 5, R. I.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, Ill. ADV. PG. 509.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 Electriccoil Transformer Co., Westerly Rd., Ossining, N. Y.
ELECTRONIC TRANSFORMER CO., INC., 207 West 25th St., New York, N. Y. ADV. PG. 428.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.

Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 568.
 Hindle Transformer Co., Inc., Flemington, N. J.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
 Industrial Transformer Co., Gouldsboro, Pa.
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.
 Lectroh, Inc., 5561 Northwest Highway, Chicago 30, Ill.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Tenth St., Brooklyn 32, N. Y. ADV. PG. 575.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
SPELLMAN TELEVISION CO., INC., 3029 Webster St., New York 67, N. Y. ADV. PG. 430, 431.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Tartak Electronics, Inc., 2979 N. Ontario St., Los Angeles, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 546.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 520.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

INDUCTANCES—r-f & i-f Receiving or Transmitting

ACE COIL & ELECTRONICS CO., 914 Middlesex Ave., Metuchen, N. J. ADV. PG. 402.
AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Atlas Coil Winders, Inc., 39 Manhattan St., Stamford, Conn.
 Automatic Mfg. Corp., 65 Gouvernor St., Newark, N. J.
 B-T Mfg. Corp., 38 N. Second Ave., Mt. Vernon, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Merion, Pa. ADV. PG. 239.
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Caddell-Burns Mfg. Co., 40 E. Second St., Minneapolis 1, Minn. ADV. PG. 520.
CAMBRIDGE THERMIONIC CORP., 445 Concord St., Cambridge 38, Mass. ADV. PG. 76.
 Carad Corp., 93 Leland Ave., San Francisco 28, Calif.
 Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
CELCO CONSTANTINE ENGINEERING LABORATORIES, 100 Island Ave., Mahwah, N. J. ADV. PG. 470.
CENTRONICS CO., 21-04 122 St., College Point, N. Y. ADV. PG. 607.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 13, Ill. ADV. PG. 601.
 Custom Electronics Corp., Morris Plains, N. J.
DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, Ill. ADV. PG. 509.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 DeWitt Development Co., 12545 S. 69th Ave., Palos Heights, Ill.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
EASTERN PRECISION RESISTOR CORP., 131-11 90 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
 Essex Electronics, Berkeley Heights, N. J.

INGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 554.

THMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.

Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.

ILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 596.

Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.

Kryner Corp., 462 N. Parkside Ave., Chicago 44, Ill.

Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.

LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.

LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-fourth St., Brooklyn 32, N. Y. ADV. PG. 575.

Lewis Spring & Mfg. Co., 2646 W. North Ave., Chicago 47, Ill.

Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.

Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.

National Coil Co., P. O. Box 1237, Sheridan, Wyo.

North Hills Electric Co., Inc., Box 427, Great Neck, N. Y.

P. C. A. ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.

Polytron Corp., 47 Martine Ave., White Plains, N. Y.

Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.

Raypar, Inc., 7800 W. Addison St., Chicago, Ill.

REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 615.

Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.

Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.

Scientific Assembly Co., 65 Hone St., Brooklyn 11, N. Y.

SICKLES, F. W., DIV. GENERAL INSTRUMENT CORP., 165 Front St., Chicopee, Mass. ADV. PG. 357.

PELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 430, 431.

Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.

Stanwyck Winding Co., 137 Waish Ave., Newburgh, N. Y.

Summit Coil Co., 67 Union Pl., Summit, N. J.

Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.

Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.

Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.

Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 6, Calif.

Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

Wheaton Co., T. C., Electronic Div., Millville, N. J.

Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

INDUCTANCES—Relay

Acme Wire Co., New Haven 14, Conn.

ELECTRONIC COILS, INC., Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 570.

Five Star Co., 440 Mixville Rd., West Cheshire, Conn.

WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346.

INDUCTANCES—Solenoid

See Inductances, Magnet

INDUCTANCES—Speaker

Acme Wire Co., New Haven 14, Conn.

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.

Carron Mfg. Co., 15 S. Aberdeen St., Chicago, Ill.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.

DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 542.

DeLuxe Coils, Inc., Wabash, Ind.

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.

Eltran Corp., St. Anne, Ill.

Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.

HEPPNER MFG. CO., P. O. Box 612, Round Lake, Ill. ADV. PG. 243.

OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.

PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.

Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.

Quam-Nichols Co., Marquette Rd. & Prairie Ave., Chicago 37, Ill.

Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.

Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

INDUCTANCES—Television Focusing

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.

Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.

CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.

Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.

DeLuxe Coils, Inc., Wabash, Ind.

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.

DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.

EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.

Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.

Glaser-Stears Corp., 2 Main St., Belleville 9, N. J.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 253.

Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.

I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Philadelphia 30, Pa. ADV. PG. 396.

KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.

Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.

OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.

Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.

Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.

Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.

Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.

Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346.

INDUCTANCES—Toroidal

A.P.W. Co., 72 W. Main St., Rockaway, N. J.

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 202, 203.

AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.

Allied Mfg. Corp., 605-07 61st St., West New York, N. J.

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.

Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 215.

Carad Corp., 93 Leland Ave., San Francisco 28, Calif.

CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.

Coast Coil Co., 5332 W. Washington Blvd., Los Angeles 16, Calif.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A., Los Angeles 15, Calif.

COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.

CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.

Coto-Coil Co., Inc., 65 Pavilion Ave., Providence 5, R. I.

D & R, Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.

DECOURSEY ENGINEERING LAB., P. J. Box 235, Los Angeles 25, Calif. ADV. PG. 602.

DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.

Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.

ELECTRONIC COILS, INC., Box 1641, 44 Taylor St., Springfield, Mass. ADV. PG. 570.

Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.

EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.

Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.

Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.

Harder Co., Donald C., 3338 India St., San Diego 1, Calif.

HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.

Industrial Transformer Co., Gouldsboro, Pa.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.

KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.

KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.

LENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. ADV. PG. 540.

LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-fourth St., Brooklyn 32, N. Y. ADV. PG. 575.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.

MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 228.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.

Peerless Electrical Products Div. of Altco Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.

Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.

Raypar, Inc., 7800 W. Addison St., Chicago, Ill.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 420.

SICKLES, F. W., DIV. GENERAL INSTRUMENT CORP., 165 Front St., Chicopee, Mass. ADV. PG. 357.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.

Square Root Mfg. Corp., 391 Saw Mill Rd., Yonkers, N. Y.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.

Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.

Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.

TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 364.

TOROCOIL CO., 1374 Mobile Court, St. Louis, Mo. ADV. PG. 436.

TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.

Transformer Engineers, 161 E. California St., Pasadena 1, Calif.

TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.

Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 606, 607.

VARI-L CO., INC., P. O. Box 1433, Stamford, Conn. ADV. PG. 523.

INDUCTANCES—Transformer Coils & Windings

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536.

ACE COIL & ELECTRONICS CO., 914 Middlesex Ave., Metuchen, N. J. ADV. PG. 402.

ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. ADV. PG. 453.

Acme Wire Co., New Haven 14, Conn.

Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.

Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.

ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. ADV. PG. 194, 195.

Allied Mfg. Corp., 605-07 61st St., West New York, N. J.

Alpha Electronics, Inc., Route 17, Ramsey, N. J.

Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind.

Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.

- Atlas Coil Winders, Inc., 39 Manhattan St., Stamford, Conn.
- ATLAS ENGINEERING CO.**, 3 Edgewood St., Roxbury, Mass. ADV. PG. 558.
- Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
- Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
- Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.
- Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.
- CELCO CONSTANTINE ENGINEERING LABORATORIES CO.**, Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
- CENTRAL TRANSFORMER CO.**, 910 W. Jackson Blvd., Chicago, Ill. ADV. PG. 577.
- Chicago Electronic Engineering Co., 3224 W. Armitage Ave., Chicago 47, Ill.
- CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP.**, 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.
- Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
- COILCRAFT, INC.**, 3716 N. Cicero Ave., Chicago 41, Ill. ADV. PG. 601.
- COMAR ELECTRIC CO.**, 3349 W. Addison St., Chicago 18, Ill. ADV. PG. 494.
- Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
- Coto-Coil Co., Inc., 65 Pavilion Ave., Providence 5, R. I.
- Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
- Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill.
- Crittenden Transformer Co., 1220 Nadeau St., Los Angeles, Calif.
- Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J.
- DANO ELECTRIC CO.**, Main St., Winsted, Conn. ADV. PG. 542.
- Delco Radio Div., General Motors Corp., Kokomo, Ind.
- DeLuxe Coils, Inc., Wabash, Ind.
- DIETZ DESIGN & MFG. CO.**, Grandview 6, Mo. ADV. PG. 498.
- Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo.
- Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
- Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.
- EISLER ENGINEERING CO., INC.**, 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
- Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
- Electrocoil Transformer Co., Westerly Rd., Ossining, N. Y.
- ELECTRONIC TRANSFORMER CO., INC.**, 207 W. 25th St., New York, N. Y. ADV. PG. 428.
- Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
- EMPIRE COIL CO., INC.**, Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
- Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
- EPCO PRODUCTS, INC.**, 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486.
- FEDERAL TELEPHONE & RADIO CORP.**, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
- FERRANTI ELECTRIC, INC.**, 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
- Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
- Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio.
- FREED TRANSFORMER CO., INC.**, 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
- Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8, Calif.
- Geotronic Labs., Inc., Dallas 11, Texas.
- Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
- GUTHMAN, INC., EDWIN I.**, 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
- Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.
- Harder Co., Donald C., 3338 India St., San Diego 1, Calif.
- HIGHLAND ENGINEERING CO.**, Main St. & Urban Ave., Westbury, N. Y. ADV. PG. 568.
- Hindle Transformer Co., Inc., Flemington, N. J.
- Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
- Industrial Transformer Co., Gouldsboro, Pa.
- KETAY MFG. CORP.**, 555 Broadway, New York 12, N. Y. ADV. PG. 159.
- KENYON TRANSFORMER CO., INC.**, 840 Barry St., New York 59, N. Y. ADV. PG. 272.
- Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
- LEONARD ELECTRIC PRODUCTS CO., INC.**, 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
- MAGNETIC AMPLIFIERS, INC.**, 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
- Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa.
- Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
- May Co., Donald M., 6055 Lankershim Blvd., North Hollywood, Calif.
- Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
- Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
- Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, Ill.
- Omega Mfg. Co., 40 Hudson St., New York, N. Y.
- ORTHO FILTER CORP.**, 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
- OXFORD ELECTRIC CORP.**, 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.
- P C A ELECTRONICS INC.**, 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
- Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.
- Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
- Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
- Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
- Randall, Inc., Douglas, 102 High St., Westerly, R. I.
- RAYTHEON MFG. CO.**, Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
- Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
- Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
- Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
- Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
- SICKLES, F. W., DIV., GENERAL INSTRUMENT CORP.**, 165 Front St., Chicopee, Mass. ADV. PG. 357.
- Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
- SPELLMAN TELEVISION CO., INC.**, 3029 Webster Ave., New York 67, N. Y. ADV. PG. 430, 431.
- Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
- Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
- Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.
- Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
- Stromberg-Carlson Co., Rochester 3, N. Y.
- Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
- T V Products Corp., 907 E. 23rd St., Paterson, N. J.
- Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.
- Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
- Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
- Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.
- Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.
- Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
- Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
- TOROCOIL CO.**, 1374 Mobile Court, St. Louis, Mo. ADV. PG. 436.
- Transformer Engineers, 161 E. California St., Pasadena 1, Calif.
- TRANSFORMER SPECIALTY CO., INC.**, Bala Cynwyd, Pa. ADV. PG. 546.
- Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
- Trenton Transformer Corp., Trenton, N. J.
- TRESCO**, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 520.
- TRIAD TRANSFORMER MFG. CO.**, 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.
- UNION ELECTRIC PRODUCTS CO.**, 24 Edison Pl., Newark 2, N. J. ADV. PG. 414.
- U. S. ELECTRONICS CORP.**, 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
- UNITED TRANSFORMER CO.**, 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
- UNIVERSAL MFG. CO., INC.**, 410 Hillside Ave., Hillside, N. J. ADV. PG. 606, 607.
- Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
- WHEELER INSULATED WIRE CO., INC.**, 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346.
- White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
- Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
- National Coil Co., P. O. Box 1237, Sheridan, W. Va.
- North Hills Electric Co., Inc., Box 427, Great Neck, N. Y.
- Penn Tran Corp., Bellefonte, Pa.
- Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
- Polytron Corp., 47 Martine Ave., White Plains, N. Y.
- Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.
- Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
- Rappaport, Inc., 7800 W. Addison St., Chicago, Ill.
- REDMAN ELECTRONICS CORP.**, P. O. Box 72, Torrington, Conn. ADV. PG. 615.
- Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
- SICKLES, F. W., DIV. GENERAL INSTRUMENT CORP.**, 165 Front St., Chicopee, Mass. ADV. PG. 357.
- Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
- Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
- Standard Winding Co., 44-62 Johnes St., Newburgh, N. Y.
- Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
- Summit Coil Co., 67 Union Pl., Summit, N. J.
- Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
- Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
- TEL-RAD MFG. CO., INC.**, 7th & Madison St., Milwaukee, Wis. ADV. PG. 620.
- Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
- Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
- Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
- TRIAD TRANSFORMER MFG. CO.**, 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.

INDUCTORS—Variable Electronic

- BARKER & WILLIAMSON**, 235 Fairfield Ave., Darby, Pa. ADV. PG. 239.
- C. G. S. LABORATORIES, INC.**, 391 Ludlow St., Hartford, Conn. ADV. PG. 558.
- Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
- CAMBRIDGE THERMIONIC CORP.**, 445 Concord St., Cambridge 38, Mass. ADV. PG. 76.
- CENTRAL TRANSFORMER CO.**, 910 W. Jackson St., Chicago, Ill. ADV. PG. 577.
- FREED TRANSFORMER CO., INC.**, 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
- GENERAL RADIO CO.**, 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
- Industrial Television, Inc., 359 Lexington Ave., City, N. J.
- JOHNSON CO., E. F.**, Waseca, Minn. ADV. PG. 404.
- LENKURT ELECTRIC CO., INC.**, 1113 County St., San Carlos, Calif. ADV. PG. 540.
- MAGNETIC AMPLIFIERS, INC.**, 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
- Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
- U. S. ELECTRONICS CORP.**, 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
- UNITED TRANSFORMER CO.**, 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
- VARI-L CO., INC.**, P. O. Box 1433, Stamford, Conn. ADV. PG. 523.

INDUCTION HEATING

See Heating, Induction

INDUCTORS

See Chokes and Inductances, Choke

INFRA-RED DRYING OVENS

See Ovens

INSPECTION EQUIPMENT—Lighting

- American Optical Co., Box A, Buffalo 15, N. Y.
- Burton Mfg. Co., 11201 W. Pico Blvd., Los Angeles 4, Calif.
- Fostoria Pressed Steel Corp., Fostoria, Ohio.
- Hanovia Chemical & Mfg. Co., 233 N.J.R.R. Ave., Newark, N. J.
- HUGHEY & PHILLIPS**, P. O. Box 686, Encino, Calif. ADV. PG. 254.
- Magnaflex Corp., 5900 Northwest Hwy., Chicago 31, Ill.
- Menlo Research Laboratory, Menlo Park, Calif.

INSTRUMENT PARTS—Precision

- American Optical Co., Box A, Buffalo 15, N. Y.
- Arma Corp., 254 36th St., Brooklyn 32, N. Y.
- Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
- Barnes Development Co., Lansdowne, Pa.
- Beck's Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
- Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
- BRAUN TOOL & INSTRUMENT CO., INC.**, H. J. Fifth Ave., Hawthorne, N. J. ADV. PG. 346.
- Bristol Co., The, Waterbury 20, Conn.
- BURKE & JAMES INC.**, 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 418.

INDUCTANCES—Width Control

- AEROCOIL INC.**, 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
- AEROLITE ELECTRONICS CORP.**, 507 26th St., Union City, N. J. ADV. PG. 585.
- Alpha Electronics, Inc., Route 17, Ramsey, N. J.
- Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
- Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
- CELCO CONSTANTINE ENGINEERING LABORATORIES CO.**, Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
- CENTRONICS CO.**, 21-04 122 St., College Point, N. Y. ADV. PG. 607.
- CHICAGO TRANSFORMER DIV. ESSEX WIRE CORP.**, 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.
- Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
- COILCRAFT, INC.**, 3716 N. Cicero Ave., Chicago 42, Ill. ADV. PG. 601.
- DX RADIO PRODUCTS CO., INC.**, 2300 W. Armitage Ave., Chicago 47, Ill. ADV. PG. 509.
- Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
- Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
- EMPIRE COIL CO., INC.**, Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
- FUGLE-MILLER LABORATORIES, INC.**, 398 Main St., Metuchen, N. J. ADV. PG. 554.
- GUTHMAN INC., EDWIN I.**, 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
- HILLBURN ELECTRONIC PRODUCTS CO.**, 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 596.
- HOULIHAN CO., T. J.**, 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 443.
- Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
- LEONARD ELECTRIC PRODUCTS CO., INC.**, 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
- Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
INATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
AVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 Eastern Specialty Co., Philadelphia 40, Pa.
 Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
 Felsenthal & Sons Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
 Gerner Co., R. Y., 110 Pleasant St., Malden, Mass.
OMBOS CO., INC., JOHN, 103 Montgomery St., Irvington 11, N. J. ADV. PG. 274.
 Gorrell & Gorrell, Haworth, N. J.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 235.
 Hurrell-Ash Co., 165 Newberry St., Boston 16, Mass.
EARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
KEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
 Keger Products, 3901 W. 54th St., Los Angeles, Calif.
IX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
RESEARCH DEVELOPMENT MANUFACTURE, 429 E. Collom St., Philadelphia 44, Pa. ADV. PG. 508.
 Sandsteel Spring Div., Sandvik Steel, Inc., 145 Hudson St., New York 13, N. Y.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 426.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
ELECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

INSTRUMENTS—ELECTRICAL MEASURING

Ammeters to Wattmeters inclusive

AMMETERS

See also Microammeters

Micro-Microammeters
 Milliammeters

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Bede Electrical Instrument Co., Inc., Penacook, N. H.
 Bristol Co., The, Waterbury 20, Conn.
 Burlington Instrument Co., Burlington, Iowa.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Electric Design & Mfg. Corp., Burlington, Iowa.
 Elico Electronics, 140 Liberty St., New York, N. Y.
 Epey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Interline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.
LUKE ENGINEERING CO., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 578.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
ICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
INTERNATIONAL INSTRUMENTS INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
 Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.
 Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
HAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
AWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 592.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
HURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 576.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

STERLING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 527.
 Supreme, Inc., Box E-552, Greenwood, Miss.
 U. S. Gauge Div., American Machine and Metals, Inc., Sellersville, Pa.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

AMMETERS—r-f

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Burlington Instrument Co., Burlington, Iowa.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

AUDIOMETERS

Allison Laboratories, 419 Vista Del Llano Drive, Whittier, Calif.
 Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 Maico Co., Inc., 21 North Third St., Minneapolis 1, Minn.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PAGE 385.
 Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, Ill.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
 Telex, Inc., Telex Park, St. Paul 1, Minn.

BRIDGES—Electrical

Barnes Development Co., Lansdowne, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Gulton Mfg. Corp., Metuchen, N. J.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—Impedance

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 22, N. Y. ADV. PG. 219.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
 Industrial Transformer Co., Gouldsboro, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 130.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Mullard Overseas, Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
 Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—Inductance

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Industrial Transformer Co., Gouldsboro, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 130.
MERCURY ELECTRONIC CO., Box 450, Rd Bank, N. J. ADV. PG. 127.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—vhf

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.

CALIBRATORS—Sweep

AMERICAN ELECTRONIC LABS., INC., 641 Arch St., Philadelphia 6, Pa. ADV. PG. 528.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 444.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
 Missouri Research Labs., 2109 Locust St., St. Louis 3, Mo.
 Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif.
RADIO CORP. OF AMERICA, TUBE DEPT., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

CALIBRATORS—uhf

DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
 International Television Corp., 238 William St., New York 38, N. Y.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

COMPARATORS—Automatic Resistance

Barnes Development Co., Lansdowne, Pa.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.

Cole Instrument Co., 1320 S. Geand Ave., Dept. A, Los Angeles 15, Calif.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. ADV. PG. 524.
 Foxboro Co., The, Foxboro, Mass.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

COMPARATORS—Circuit Linearity

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

COMPARATORS—Crystal

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Menlo Research Laboratory, Menlo Park, Calif.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

COMPARATORS—Voltage

Arma Corp., 254 36th St., Brooklyn, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
KALBFELL LABS, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

GALVANOMETERS

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
 Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 Electro-Physical Laboratories, Inc., 65 Harvard Ave., Stamford, Conn.
G-M LABORATORIES, INC., 4336 N. Knox Ave., Chicago 111, Ill. ADV. PG. 497.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hathaway Instrument Co., 1315 S. Clarkston St., Denver 10, Colo.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

INSTRUMENTS—Panel

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bennett Mfg. Co., Alden, N. Y.
BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.

BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 368.
 Bristol Co., The, Waterbury 20, Conn.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Burlington Instrument Co., Burlington, Iowa.
 Circuitron, Inc., 400 Ninth St., Hoboken, N. J.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Corry-Jamestown Mfg. Co., Corry, Pa.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
 Electric Design & Mfg. Co., Burlington, Iowa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Northeastern Engineering Inc., Manchester, N. H.
 Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
 Panelcraft, 8027 S.E. 13th Ave., Portland 2, Ore.
 Pfefer Products, 3901 W. 54th St., Los Angeles, Calif.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 576.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
STERLING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 527.
 Supreme, Inc., Box E-552, Greenwood, Miss.
 Teller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

INSTRUMENTS—Ultrasonic

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mount Vernon, N. Y. ADV. PG. 546.
ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 581.
 Atlantic Research Corp., 808 N. Royal St., Alexandria, Va.
 Bendix Aviation Corp., 203 W. Third St., Cincinnati 2, Ohio.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Dice Co., J. W., Englewood, N. J.
ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Magnaflex Corp., 5900 Northwest Hwy., Chicago 31, Ill.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Soery Products, Inc., Danbury, Conn.
 Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.

MAGNETOMETERS

ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
 Generator Corp., Box 463, Manassas, Va.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
MAGNETICS, INC., Box 230-A, Butler, Pa. ADV. PG. 561.

RAWSON ELECTRICAL INSTRUMENT CO., 111 St., Cambridge 42, Mass. ADV. PG. 592.
 Ruska Instrument Corp., 4607 Montrose Blvd., Houston 6, Texas.
VARIAN ASSOCIATES, 990 Varian St., San Jose, Calif. ADV. PG. 392, 393.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

MEGOhmmeters

Associated Research Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Bendix Aviation Corp., 203 W. Third St., Cincinnati 2, Ohio.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Dice Co., J. W., Englewood, N. J.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 26, Pa.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 MacLeod & Hanopol, Inc., 10 Roland St., Charleston 29, Mass.
STITCH CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Electronic Capacitance

AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 477.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cinema-Television Ltd., Worsley Bridge Rd., London 26, England.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 MacLeod & Hanopol, Inc., 10 Roland St., Charleston 29, Mass.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Telephones & Cables Ltd., Connaught Place, Aldwych, London, W.C. 2, England.

METERS—Field Strength

American Electroneering Corp., 2040 Colorado St., Santa Monica, Calif.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Calbest Engineering & Electronics Co., 828 N. Hollywood Ave., Hollywood 38, Calif.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
Erwood, Inc., 1770 Berteau Ave., Chicago 13, Ill.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 17, N. Y.
FEDERAL TELEPHONE & RADIO CORP., 88 Kinross Rd., Clifton, N. J. ADV. PG. 148-153.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Ferris Instrument Co., 110 Cornelia St., Boonton, N. J.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Mount Pleasant Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Industrial Television, Inc., 359 Lexington Ave., New York 17, N. Y.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
 Jowl Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 130.
 Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.

Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 TODDART AIRCRAFT RADIO CO., 6644 Santa Monica Blvd., Hollywood 38, Calif. ADV. PG. 615.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 Vidicon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

METERS—f-m Deviation

See also Monitors

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 CROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 444.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Lampkin Laboratories, Inc., Bradenton 1, Fla.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

METERS—Frequency

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 621.
 Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.
 Middle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
 CROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 444.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Conn. Ltd., C. G., Electronics Div., Elkhart, Ind.
 CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Elmont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 415.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 FREQUENCY STANDARDS, Box 504, Asbury Park, N. J. ADV. PG. 102.
 Gates Radio Co., Quincy, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Marcon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 International Television Corp., 238 William St., New York 38, N. Y.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.
 Lampkin Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Lampkin Laboratories, Inc., Bradenton 1, Fla.
 Warner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Allen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.

NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 196-198.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Wheeler Laboratories, Inc., Great Neck, N. Y.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

METERS—Impedance

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 621.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 512.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.

METERS—Modulation

See Also Monitors, Modulation

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Gates Radio Co., Quincy, Ill.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Lampkin Laboratories, Inc., Bradenton 1, Fla.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

METERS—Null

AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
 Electric Design & Mfg. Corp., Burlington, Iowa.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 453.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.
 KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.

Macdonald Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
 Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Output

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Feller Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 Gates Radio Co., Quincy, Ill.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Marconi Wireles Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Weston Laboratories, Inc., Harvard, Mass.

METERS—Panel

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 Bristol Co., The, Waterbury 20, Conn.
 Burlington Instrument Co., Burlington, Iowa.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Electric Design & Mfg. Corp., Burlington, Iowa.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.
 Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
 Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 576.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 STERLING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 527.
 Supreme, Inc., Box E-552, Greenwood, Miss.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Phase Angle

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DELTRON, INC., P. O. Box 192, Glenside, Pa. ADV. PG. 613.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 453.
 MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
 TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

METERS—Power Factor

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 FLUKE ENGINEERING CO., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 578.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

METERS—Q

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.

METERS—RF Power

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 66.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Control Electronics Co., Inc., 1925 New York Ave., Huntington Station, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 FLUKE ENGINEERING CO., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 578.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 440.
 MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Rollin Co., 2010 N. Lincoln Ave., Pasadena 3, Calif.
 Sierra Electronic Corp., San Carlos, Calif.
 Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

METERS—Standing Wave Ratio

BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 66.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 440.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Sierra Electronic Corp., San Carlos, Calif.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

METERS—Wave

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 FREQUENCY STANDARDS, Box 504, Asbury Park, N. J. ADV. PG. 102.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

METERS—X-Ray Intensity

ANTON ELECTRONIC LABORATORIES, INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 282.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 Jordan Electronic Mfg. Co., Inc., Union Bldg., 119 E. Union St., Pasadena 1, Calif.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
 Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.

Tracerlab, Inc., 130 High St., Boston 10, Ma
 VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.
 X-Ray Dept. of General Electric Co., 4855 Electric Milwaukee 14, Wis.

MICROAMMETERS

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 87.
 Burlington Instrument Co., Burlington, Iowa.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Island City 1, N. Y. ADV. PG. 370, 371.
 Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
 Electric Design & Mfg. Corp., Burlington, Iowa.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 3, New Haven 15, Conn. ADV. PG. 563.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Macdonald Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass.
 MARION ELECTRICAL INSTRUMENT CO., 402 St., Manchester, N. H. ADV. PG. 472.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 12, Ind.
 Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.
 Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
 Precision Apparatus Co., inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
 RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 St., Cambridge 42, Mass. ADV. PG. 592.
 ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

MICROFARADMETERS

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

MICRO-MICROAMMETERS

Beckman Instruments, Inc., 820 Mission St., South San Francisco 1, Calif.
 BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 87.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 72.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 St., Cambridge 42, Mass. ADV. PG. 592.
 Simpson Electric Co., Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

MILLIAMMETERS

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Burlington Instrument Co., Burlington, Iowa.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.

DEJUR-AMSCO CORP., Northern Blvd., at 45th St., Long Island City 1, N. Y. ADV. PG. 370, 371.

Electric Design & Mfg. Corp., Burlington, Iowa.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.

Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.

Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.

Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.

Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.

RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.

SENSITIVE RESEARCH INSTRUMENT COP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 576.

Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

STERLING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 527.

Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.

Supreme, Inc., Box E-552 Greenwood, Miss.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

Wallace & Tiernan Co., Inc., Belleville 9, N. J.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

MILLIVOLTMETERS

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.

Assembly Products, Inc., Chagrin Falls 6, Ohio.

Beede Electrical Instrument Co., Inc., Penacook, N. H.

Bristol Co., The Waterbury 20, Conn.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.

DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 370, 371.

Doelcam Corp., 56 Elmwood St., Newton 58, Mass.

Edin Co., Inc., 207 Main St., Worcester, Mass.

Electric Design & Mfg. Corp., Burlington, Iowa.

Electro-Mechanical Research, Inc., Ridgefield, Conn.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Foxboro Co., The, Foxboro, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.

INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.

Supreme, Inc., Box E-552, Greenwood, Miss.

Taco West Corp., 525 N. Noble St., Chicago 22, Ill.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

OHMMETERS

Airmec Ltd., High Wycombe, Buckinghamshire, England.

Associated Research Inc., 3788 W. Belmont Ave., Chicago 18, Ill.

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.

Dice Co., J. W., Englewood, N. J.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.

Epco Electronics, 140 Liberty St., New York, N. Y.

Esterline-Angus Co., Inc., P. O. Box 586, Indianapolis, Ind.

Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

HEATH CO., Benton Harbor, Mich. ADV. PG. 486.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.

Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.

INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.

Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.

Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.

Lyman Electronic Corp., 12 Cass St., Springfield, Mass.

Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.

RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.

ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 576.

Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.

Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.

Supreme, Inc., Box E-552, Greenwood, Miss.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

RATIOMETERS

Bourne Laboratories, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.

EDISON, INC., THOMAS A., INSTRUMENT DIV., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 300, 301.

KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

RECORDERS—Frequency

BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.

Cinema-Television Ltd., Worsley Bridge Rd., London S.E. 26, England.

DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.

FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.

Sound Apparatus Co., Stirling, N. J.

RECORDERS—Power Level

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.

Bristol Co., The, Waterbury 20, Conn.

FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

Sound Apparatus Co., Stirling, N. J.

RECORDERS—Telemetering

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.

AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 94, 95.

Apelex Corporation, Concord, N. H.

APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44, Princeton, N. J. ADV. PG. 386.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.

BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.

Bristol Co., The, Waterbury 20, Conn.

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.

Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.

DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.

HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.

Little, Inc., Arthur D., Cambridge, Mass.

Magnasync Mfg. Co., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.

Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.

Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.

STANDARDS—Capacitance

FRED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.

Muirhead & Co., Ltd., Beckenham, Kent, England.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

STANDARDS—Frequency

Airmec Ltd., High Wycombe, Buckinghamshire, England.

BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 361.

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
 DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 550.
 LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 NORMAN LABORATORIES, ERNST, Williams Bay, Wis. ADV. PG. 620.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. S. 2, England.
 TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

STANDARDS—Inductance

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

STANDARDS—Resistance

Avor Corp., 450 Broome St., New York 13, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 ELECTRO-MEC LABORATORY, 120 43rd Ave., Long Island City, N. Y. ADV. PG. 486.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
 SENSITIVE RESEARCH INSTRUMENT CORPORATION, 9 Elm Avenue, Mount Vernon, N. Y. ADV. PG. 617.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

TRACERS—Signal

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Lee Electronics Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 Scala Radio Co., 2814 19 St., San Francisco 10, Calif.
 Special Products Co., Silver Spring, Maryland.

VOLTMETERS

Assembly Products, Inc., Chagrin Falls 6, Ohio.

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 Bristol Co., The Waterbury 20, Conn.
 Burlington Instrument Co., Burlington, Iowa.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 370, 371.
 Electric Design & Mfg. Corp., Burlington, Iowa.
 ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Epco Electronics, 140 Liberty St., New York, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
 Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.
 Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 592.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
 ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
 SENSITIVE RESEARCH INSTRUMENT CORPORATION, 9 Elm Avenue, Mount Vernon, N. Y. ADV. PG. 617.
 SHURITE METERS, 35-B Hamilton St., New Haven 6, Conn. ADV. PG. 576.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 STERLING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 527.
 Supreme, Inc., Box E-552, Greenwood, Miss.
 U. S. Gauge Div., American Machine and Metals, Inc., Sellersville, Pa.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

VOLTMETERS—Crystal

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.

VOLTMETERS—Electronic

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
 AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 546.
 Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 146.
 BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 87.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.
 Co-design Corp., 751 Main St., Winchester, Mass.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 COMPUTER CORP. OF AMERICA, 149 Church St., New York, N. Y. ADV. PG. 594.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 DuMont Laboratories, Inc., Allen B., Instrumentation, 760 Bollingfield Ave., Clifton, N. J.
 ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Electronic Measurements Corp., 280 Lafayette St., York 12, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 G & M Equipment Co., Inc., 7309-7327 Varna North Hollywood, Calif.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
 INSTRUMENT ELECTRONICS CORP., 90 Main St., Washington, N. Y. ADV. PG. 586.
 Jackson Electrical Instrument Co., 16 S. Patterson Bl., Dayton 1, Ohio.
 KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 72.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 187.
 Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
 MILLIVAC INSTRUMENT CORP., 444 Second St., New York 11, N. Y. ADV. PG. 611.
 Philco Corp., Accessory Div., A & Allegheny Philadelphia 34, Pa.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back and Back Covers.
 Reed Research, Inc., 1048 Potomac St., N.W., Washington, D. C.
 Reiner Electronics Co., Inc., 152 W. 25th St., New York, N. Y.
 Scientific Specialties Corp., Snow & Union Sts., Brighton 35, Mass.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., New York 17, N. Y.
 Sierra Electronic Corp., San Carlos, Calif.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Southwestern Industrial Electronics Co., 2831 Post Rd., P. O. Box 13058, Houston 19, Texas.
 Special Instruments Lab., Inc., 1003 Highland Knoxville, Tenn.
 Stockman Electronics Research Co., 543 Lexington Waltham 54, Mass.
 Supreme, Inc., Box E-552, Greenwood, Miss.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 Western Electro-Acoustic Labs., 204 S. Beverly Dr., Beverly Hills, Calif.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Weston Laboratories, Inc., Harvard, Mass.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

VOLT-OHM-MILLIAMMETERS

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 546.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Electronic Measurements Corp., 280 Lafayette St., York 12, N. Y.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Epco Electronics, 140 Liberty St., New York, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.

Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Philco Corp., Accessory Div. A & Allegheny Ave., Philadelphia 34, Pa.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295; Inside Back & Back Covers.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Superior Instrument Co., 227 Fulton St., New York, N. Y.
 Supreme, Inc., Box E-552, Greenwood, Miss.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. Y. ADV. PG. 350.
 Weston Laboratories, Inc., Harvard, Mass.

WATTMETERS

NOTE: e indicates electronic

BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 66.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St., 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif. (e)
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555. (e)
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill. (e)
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich. (e)
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. (e)
FLUKE ENGINEERING CO., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 578. (e)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18. (e)
HEATH CO., Benton Harbor, Mich. ADV. PG. 486. (e)
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif. (e)
JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 440.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 72. (e)
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385. (e)
 Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
 Miller Corp., William, 325 N. Halstead Ave., Pasadena 8, Calif. (e)
 Radiation, Inc., Melbourne, Fla. (e)
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill. (e)
ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
 Rollin Co., 2010 N. Lincoln Ave., Pasadena 3, Calif. (e)
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Slightmaster of California Co., Gillespie Airport, Santee, Calif.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill. (e)
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio. (e)
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Weston Laboratories, Inc., Harvard, Mass. (e)

INSTRUMENTS—Electronic Musical

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Magna Electronics Co., 9810 Anza Ave., P. O. 338, Inglewood, Calif.
ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
 Transviston, Inc., 460 North Ave., New Rochelle, N. Y.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.

INSTRUMENTS—Graphic Recording

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Burdick Corp., Milton, Wis.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Gaertner Scientific Corp., 1239 Wrightwood Ave., Chicago 14, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gerber Scientific Instrument Co., 89 Spruce St., Hartford 1, Conn.
 Gorrell & Gorrell, Haworth, N. J.
 Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 426.
 Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
 Tallor & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
 Thompson Products, Inc., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

INSTRUMENTS—Panel Instruments—Ultrasonic

See Instruments—Electrical Measuring

INSULATING COMPOUNDS

Asphalts

BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 506.
BORTHIG CO., INC., GEORGE C., P. O. Box 115, East Rutherford, N. J. ADV. PG. 584.
 Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

Coil Dopes

Acme Wire Co., New Haven 14, Conn.
 Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
CIBA CO., INC., 627 Greenwich St., New York 14, N. Y. ADV. PG. 377.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Communication Products Co., Inc., Marlboro, N. J.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20, N. Y. ADV. PG. 567.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 612.
 Schenectady Varnish Co., Schenectady, N. Y.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Enamel

Acme Wire Co., New Haven 14, Conn.
 Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
BORTHIG CO., INC., GEORGE C., P. O. Box 115, East Rutherford, N. J. ADV. PG. 584.
CIBA CO., INC., 627 Greenwich St., New York 14, N. Y. ADV. PG. 377.
 du Pont de Nemours & Co., Inc., E. 1., Wilmington 98, Delaware.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Schenectady Varnish Co., Schenectady, N. Y.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.

Impregnating Compounds

Acme Wire Co., New Haven 14, Conn.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 506.
BORTHIG CO., INC., GEORGE C., P. O. Box 115, East Rutherford, N. J. ADV. PG. 584.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
CIBA CO., INC., 627 Greenwich St., New York 14, N. Y. ADV. PG. 377.
 Dow Corning Corp., Midland, Mich.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20, N. Y. ADV. PG. 567.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 612.
 Javex, P. O. Box 646, Redlands, Calif.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schenectady Varnish Co., Schenectady, N. Y.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
 Stevenson Bro. & Co., 110 Race St., Philadelphia 6, Pa.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

Insulating Varnish

Acme Wire Co., New Haven 14, Conn.
 Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
BORTHIG CO., INC., GEORGE C., P. O. Box 115, East Rutherford, N. J. ADV. PG. 584.
 Brooklyn Paint and Varnish Co., Inc., 50 Jay St., Brooklyn, N. Y.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
CIBA CO., INC., 627 Greenwich St., New York 14, N. Y. ADV. PG. 377.
 Dow Corning Corp., Midland, Mich.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 George Co., P. D., 5200 N. Second St., St. Louis, Mo.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 612.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Reichhold Chemicals, Inc., 630 Fifth Ave., New York 20, N. Y.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.

Lacquer

Acme Wire Co., New Haven 14, Conn.
 Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.

Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.
 Communication Products Co., Inc., Marlboro, N. J. du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 612.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.

Phenolic Molding Compounds

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis 4, Ind.
 Rogers Corp., Manchester, Conn.

Pitch

BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 506.
 Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis 4, Ind.
 ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

Protective Sealers

Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
 BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 506.
 BORTHIG CO., INC., GEORGE C., P. O. Box 115, East Rutherford, N. J. ADV. PG. 584.
 Brooklyn Paint & Varnish Co., Inc., 50 Jay St., Brooklyn, N. Y.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 Cox & Co., Inc., 50 Broad St., New York 4, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 612.
 Javex, P. O. Box 646, Redlands, Calif.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schenectady Varnish Co., Schenectady, N. Y.
 ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

Resins

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 506.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. 945, Arcadia, Calif.
 CIBA CO., INC., 627 Greenwich St., New York 14, N. Y. ADV. PG. 377.
 Dow Chemical Co., Midland, Mich.
 Dow Corning Corp., Midland, Mich.
 EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Goodrich Chemical Co., B. F., Rose Bldg., 2060 E. Ninth St., Cleveland 15, Ohio.
 Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Reichhold Chemicals, Inc., 630 Fifth Ave., New York 20, N. Y.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schenectady Varnish Co., Schenectady, N. Y.
 Shell Chemical Corp., 500 Fifth Ave., New York 36, N. Y.

Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
 U. S. Stoneware Co., The, Akron 9, Ohio.

Silicone Compounds

Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
 Dow Corning Corp., Midland, Mich.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Linde Air Products Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 U. S. Stoneware Co., The, Akron 9, Ohio.

Varnish Cambric Coatings

Acme Wire Co., New Haven 14, Conn.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
 ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Mica Insulator Co., Schenectady 1, N. Y.
 Schenectady Varnish Co., Schenectady, N. Y.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Waxes

Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 506.
 Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
 Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.
 Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.
 HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20, N. Y. ADV. PG. 567.
 INSL-X CO., INC., Water St., Ossining, N. Y. ADV. PG. 612.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
 Stevenson, Bro. & Co., 110 Race St., Philadelphia 6, Pa.
 ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

INSULATION MATERIALS

Aluminum Oxide

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 AMERICAN LAVA CORP., Chatanooga 5, Tenn. ADV. PG. 161.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Frenchtown Porcelain Co., Trenton 9, N. J.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Linde Air Products Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Norton Co., 1 New Bond St., Worcester 6, Mass.
 SEALTRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Asbestos

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Keasbey & Mattison, Ambler, Pa.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.

Bead

BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 521.

Insulantite Mfg. Corp., Stirling, N. J.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Saxenburg Ceramics, Saxenburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 STEWARD MFG. CO., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 THOR CERAMICS, INC., 225 Belleville Av., Bloomfield, N. J. ADV. PG. 453.
 U. S. Stoneware Co., The, Akron 9, Ohio.

Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 CENTRALAB DIV. OF GLOBE UNION, INC., 9147 Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 11, N. J.
 CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
 ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Canton, N. J. ADV. PG. 485.
 Frenchtown Porcelain Co., Trenton 9, N. J.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Insulantite Mfg. Corp., Stirling, N. J.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 LAPP INSULATOR CO., INC., Radio Specialties Div., Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
 Louthan Mfg. Co., East Liverpool, Ohio.
 Maryland Lava Co., Bel Air, Md.
 Mykroy, Inc., Wheeling, Ill.
 Porcelain Products, Inc., Findlay, Ohio.
 Saxenburg Ceramics, Saxenburg, Pa.
 SEALTRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 STEWARD MFG. CO., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wisconsin Porcelain Co., Sun Prairie, Wis.

Fabric

ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.

Fibre

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Rogers Corp., Manchester, Conn.
 Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Taylor Fibre Co., Norristown, Pa.
 West Virginia Pulp & Paper Co., 230 Park Ave., New York 17, N. Y.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Glass

Corning Glass Works, Corning, N. Y.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 235.
MANSOL CERAMICS, 13 Valley St., Belleville, N. J. ADV. PG. 594.
 Pittsburgh Plate Glass Co., 2000 Grant Bldg., Pittsburgh 19, Pa.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 545.
SEALTRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
 Thompson Co., H. I., 1733 Cordova St., Los Angeles 7, Calif.

Glass Bonded Mica

Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Huse Liberty Mica Co., 171 Camden St., Boston, Mass.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 Mykroy, Inc., Wheeling, Ill.
 National Electric Coil Co., Columbus 16, Ohio.

Glass Fibre

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.
 Owens-Corning Fiberglas Corp., 16 E. 56th St., New York 22, N. Y.
 Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.
 Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24 Sylvan Ave., Toledo 6, Ohio.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Thompson Co., H. I., 1733 Cordova St., Los Angeles 7, Calif.

Glass Mica—Woven or Laminated

BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Huse Liberty Mica Co., 171 Camden St., Boston, Mass.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Mica Insulator Co., Schenectady 1, N. Y.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 National Electric Coil Co., Columbus 16, Ohio.

Laminates, Woven Glass

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Keller Products Co., 41 Union St., Manchester, N. H.
 Mica Insulator Co., Schenectady 1, N. Y.
MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
PANELYTE DIV., ST. REGIS SALES CORP., 230 Park Ave., New York 17, N. Y. ADV. PG. 339.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 583.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.

Mica

Aruna Brothers, 3 Keeling Rd., New Delhi, India.
 Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Huse Liberty Mica Co., 171 Camden St., Boston, Mass.
INDUSTRIAL MICA CORP., 223 S. Van Brunt St., Englewood, N. J. ADV. PG. 490.
 Integrated Mica Corp., 202 Franklin Place, Woodmere, N. Y.
 Mica Insulator Co., Schenectady 1, N. Y.
MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 National Electric Coil Co., Columbus 16, Ohio.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Paper

Cottrell Paper Co., 88 Purchase St., Fall River, Mass.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
HARTFORD CITY PAPER CO., Hartford City, Ind. ADV. PG. 304.
 Hinde & Dauch, Sandusky, Ohio.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Mosinee Paper Mills Co., Mosinee, Wis.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Rogers Corp., Manchester, Conn.
 Schweitzer, Inc., Peter J., 405 Lexington Ave., New York 17, N. Y.
 Stevens Paper Mills, Inc., Windsor, Conn.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Plastic

See Plastic Materials

Rubber

American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
 Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 General Tire & Rubber Co., Akron, Ohio.
 Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.
 Lavelle Rubber Co., 424 N. Wood St., Chicago 22, Ill.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

Rubber—Conductive

American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.

Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 General Tire & Rubber Co., The, Akron, Ohio.
 Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

Steatite

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1, N. J.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Frenchtown Porcelain Co., Trenton 9, N. J.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Isolantite Mfg. Corp., Stirling, N. J.
KIRCHBERGER & CO., INC., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 465.
LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
 Louihan Mfg. Co., East Liverpool, Ohio.
 Maryland Lava Co., Bel Air, Md.
 Mykroy, Inc., Wheeling, Ill.
 Saxonburg Ceramics, Saxonburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
STEWART MFG. CO., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Wisconsin Porcelain Co., Sun Prairie, Wis.

INSULATION PARTS

Bead Insulation Parts

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. ADV. PG. 125.
CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Isolantite Mfg. Corp., Stirling, N. J.
KIRCHBERGER & CO., INC., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Maryland Lava Co., Bel Air, Md.
 Saxonburg Ceramics, Saxonburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
STEWART MFG. CO., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 Syncor Products Co., Malden, Mass.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

Capacitor Boxes

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Isolantite Mfg. Corp., Stirling, N. J.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.
ZERO MFG. CO., 1121 Chestnut St., Burbank, Calif. ADV. PG. 607.

Capacitor Films

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micacraft Products, Inc., 703 McCarter Highway, Newark 5, N. J.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

Ceramic Insulation Parts

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1, N. J.
 CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
 Frenchtown Porcelain Co., Trenton 9, N. J.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 HELDOR MFG. CO., Div. of Heldor Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
 Illinois Electric Porcelain Co., Macomb, Ill.
 Isolantite Mfg. Corp., Stirling, N. J.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
 Louthan Mfg. Co., East Liverpool, Ohio.
 Maryland Lava Co., Bel Air, Md.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Mykroy, Inc., Wheeling, Ill.
 Saxonburg Ceramics, Saxonburg, Pa.
 SEALTRON CO., 9701 Reading Road, Cincinnati 15, Ohio. ADV. PG. 217.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 STEWARD MFG. CO., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wisconsin Porcelain Co., Sun Prairie, Wis.

Insulating Cord

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.

Insulating Sleeves

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 BAER CO., N. S., 9 Montgomery Ave., Hillside, N. J. ADV. PG. 107.
 CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 345.
 CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
 Extruders, Inc., 3232 W. El Segundo Blvd., Hawthorne, Calif.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Markel & Sons, L. Frank, School House Lane, Norristown, Pa.
 Maryland Lava Co., Bel Air, Md.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Mykroy, Inc., Wheeling, Ill.
 National Electric Coil Co., Columbus 16, Ohio.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 532.
 Resin Industries, Santa Barbara, Calif.
 RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 583.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.

Saxonburg Ceramics, Saxonburg, Pa.
 SEALECTRO CORP., 186 Union Ave., New Rochelle, N. Y. ADV. PG. 605.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.
 Thompson Co., H. I., 1733 Cordova St., Los Angeles 7, Calif.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.

Plastic Insulation Parts

1. Extruded
2. Fabricated
3. Laminated
4. Molded

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio. 2-3.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. 4. ADV. PG. 204, 205.
 AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, Ill. 4. ADV. PG. 538.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. 2-4. ADV. PG. 111.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y. 2-3-4.
 Anchor Industrial Co., 36-36 36th St., Long Island City 6, N. Y. 1.
 Anchor Plastics Co., Inc., 36-36 36th St., Long Island City 6, N. Y. 1.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y. 1-2.
 Auburn Button Works, Inc., Auburn, N. Y. 4.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn. 2.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. 2-3. ADV. PG. 107.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn. 3.
 BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. 2-3-4. ADV. PG. 569.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. 1. ADV. PG. 308, 309.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 1.
 Cable Electric Products Co., Providence, R. I. 4.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif. 2-3-4.
 CAST OPTICS CORP., 1 Post Rd., Riverside, Conn. 2. ADV. PG. 597.
 Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill. 1-4.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. 2-3. ADV. PG. 618.
 COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. 2. ADV. PG. 260.
 COMMERCIAL PLASTICS CO., 2822 W. North Ave., Chicago 47, Ill. 1. ADV. PG. 572.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. 2-3-4. ADV. PG. 408, 409.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill. 2-3.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill. 1-2-4.
 CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. 1-2-4. ADV. PG. 303.
 Dage Electric Co., 67 N. Second St., Beach Grove, Ind. 2-4.
 EBV, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. 2-3-4. ADV. PG. 523.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio. 1.
 EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. 2-3-4. ADV. PG. 305.
 ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. 1-3. ADV. PG. 600.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill. 2-4.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio. 3.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del. 3-4.
 GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. 4. ADV. PG. 609.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. 1-2-3-4.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass. 1-3-4.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill. 1-2-3.
 General Tire & Rubber Co., Akron, Ohio. 1-3.
 Gits Molding Corp., 4600 W. Huron St., Chicago 14, Ill. 4.
 Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio. 2-3-4.
 GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. 4. ADV. PG. 462.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y. 2-3.
 Industrial Devices, Inc., 22 State Rd., Edgewater, N. J. 4.
 INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. 2. ADV. PG. 532.
 Industrial Synthetic Corp., 225 North Ave., Garwood, N. J. 1.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass. 1-2-3-4.
 Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J. 1-2-3.
 Insulating Tube Co., 26 Cottage St., P. O. Box 3, Poughkeepsie, N. Y. 3.
 Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill. 2.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y. 4.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. 2. ADV. PG. 535.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. 1. ADV. PG. 64, 65.
 Keller Products Co., 41 Union St., Manchester, N. H.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. 2.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. 2. ADV. PG. 466.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Mount Vernon, N. Y. 3-4.
 Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.
 LYNN ELECTRONIC RESEARCH CO., #9 W. Maguire Blvd., P. O. Box 69, Burbank, Calif. 2. ADV. PG. 384.
 Markel & Sons, L. Frank, School House Lane, Norristown, Pa. 1.
 Masonite Corp., 111 W. Washington St., Chicago 11, Ill. 3.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J. 1-2-3-4.
 Mica Insulator Co., Schenectady 1, N. Y. 3.
 Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill. 2-3.
 Micacraft Products Inc., 703 McCarter Highway, Newark 5, N. J.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 4.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 4.
 Molding Corp. of America, 40 Church St., Pawtucket, R. I. 4.
 Moore Co., Howard J., 266 William St., New York 38, N. Y. 2-3.
 Mykroy, Inc., Wheeling, Ill. 1-2-3-4.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, 3. ADV. PG. 85, 86.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. 1. ADV. PG. 445.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 1, N. J. 1-2-3-4.
 PANELYTE DIV., ST. REGIS SALES CORP., 230 Park Ave., New York 17, N. Y. 2-3-4. ADV. PG. 339.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. 2-3. ADV. PG. 617.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa. 3.
 Pfefer Products, 3901 W. 54th St., Los Angeles 44, Pa. 2-3.
 Plastic Products, Inc., 415 Lexington Ave., New York 17, N. Y. 4.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y. 2-3.
 POLYMER CORP., THE, Reading, Pa. 1-2-4. ADV. PG. 532.
 PRECISION PAPER TUBE CO., 2033 W. Charles St., Chicago 47, Ill. 3. ADV. PG. 545.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 14, Calif. 4.
 Resin Industries, Santa Barbara, Calif. 1.
 RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. 1-2-3-4. ADV. PG. 583.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. 2-3-4. ADV. PG. 489.
 ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 426.
 Rogers Corp., Manchester, Conn. 3.
 Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J. 2-3.
 Shore Engineering Inc., 232 West Ave., Long Branch, N. J. 2.
 Sillocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y. 2-3.
 Stevens Products Inc., 86-88 Main St., East Orange, N. J. 2-3-4.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y. 2.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 2-3-4. ADV. PG. 654-666.
 Synthane Corp., Oaks, Pa. 2-3.
 Taylor Fibre Co., Norristown, Pa. 2-3-4.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif. 2.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. 1-3-4. ADV. PG. 530, 531.
 U. S. Stoneware Co., The, Akron 9, Ohio. 1-2-3-4.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. 1. ADV. PG. 179.
 WECKESSER CO., 5261 Avondale Ave., Chicago 30, Ill. 1. ADV. PG. 568.
 Western Felt Works, 4029 Ogden Ave., Chicago, Ill.

Rods

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.

EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. ADV. PG. 600.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Insulating Fabricators of New England Inc., 69 Grove St., Watertown 72, Mass.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn, N. Y. ADV. PG. 466.
 LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 Mykroy, Inc., Wheeling, Ill.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Pfefer Products, 3901 W. 54th St., Los Angeles, Calif.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 532.
 RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 583.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Saxonburg Ceramics, Saxonburg, Pa.
 Spaulding Fibre Co. Inc., 310 Wheeler St., Tonawanda, N. Y.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

Sheets

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
 CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 Mykroy, Inc., Wheeling, Ill.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
 POLYMER CORP., THE, Reading Pa. ADV. PG. 532.
 RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 583.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

Stampings & Punchings—Ceramic

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 CENTRALAB DIV. OF GLOBE UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1, N. J.
 CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 Frenchtown Porcelain Co., Trenton 9, N. J.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Isolantite Mfg. Corp., Stirling, N. J.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Mica Fabricating Co., 53 Central Ave., New Rochelle Park, N. J.
 NATIONAL TEL-TRONICS CORP., 35 St. Casimirs Ave., Yonkers, N. Y. ADV. PG. 332.
 Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Saxonburg Ceramics, Saxonburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 STEWARD MFG. CO., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Wisconsin Porcelain Co., Sun Prairie, Wis.

Stampings & Punchings—Paper—Mica

Alpha Electronics, Inc., Route #17, Ramsey, N. J.
 Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 BAER CO., N. S., 9 Montgomery Ave., Hillside, N. J. ADV. PG. 107.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Ford Radio & Mica Corp., 436 63rd St., Brooklyn, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
 Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Pfefer Products, 3901 W. 54th St., Los Angeles, Calif.
 Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
 Rogers Corp., Manchester, Conn.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Shore Engineering Inc., 232 West Ave., Long Branch, N. J.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660
 Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.
 Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

Stampings & Punchings—Plastics or Laminates

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio.
 AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Alpha Electronics, Inc., Route #17, Ramsey, N. J.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Anchor Industrial Co., 36-36 36th St., Long Island City 6, N. Y.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
 BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
 CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
 CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 COMMERCIAL PLASTICS CO., 2822 W. North Ave., Chicago 47, Ill. ADV. PG. 572.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
 EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
 ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 532.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Pfefer Products, 3901 W. 54th St., Los Angeles, Calif.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 532.
 RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 583.
 RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Riverside Metal Co., The, Riverside, N. J.
 Rogers Corp., Manchester, Conn.
 Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.
 Shore Engineering Inc., 232 West Ave., Long Branch, N. J.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.
 WECKESSER CO., 5261 Avondale Ave., Chicago 30 Ill. ADV. PG. 568.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Tapes, Insulating

Accurate Mfg. Co., 44 Hepworth Place, Garfield, N. J.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
 Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 du Pont de Nemours & Co., Inc., E. I. Wilmington 98, Delaware.
 ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Industrial Synthetic Corp., 225 North Ave., Garwood, N. J.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.

Moore Co., Howard J., 266 William St., New York 38, N. Y.
 National Electric Coil Co., Columbus 16, Ohio.
 Permacel Tape Corp., U. S. Highway 1, New Brunswick, N. J.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 532.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Resin Industries, Santa Barbara, Calif.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 Wright & Sons Co., William E., West Warren, Mass.

INSULATORS—Antenna Insulators & Spring Assemblies

Argyle Electronics Co., 8 W. 18th St., New York 11, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 Isolantite Mfg. Corp., Stirling, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
LAPP INSULATOR CO., INC., Radio Specialties Div. 32 Gilbert St., LeRoy, N. Y. ADV. PG. 382, 383.
 Mykroy, Inc., Wheeling, Ill.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 Porcelain Products, Inc., Findlay, Ohio.
 Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls, N. Y.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

INSULATORS—Can Liner

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, Ill. ADV. PG. 538.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Rogers Corp., Manchester, Conn.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

INSULATORS—Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Bristol Co., The, Waterbury 20, Conn.
CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Colonial Insulator Co., 907 Grant St., Akron 11, Ohio.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
 Frenchtown Porcelain Co., Trenton 9, N. J.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.
HELDOR MFG. CO., Div. of Heldor Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 235.
 Illinois Electric Porcelain Co., Macomb, Ill.
 Isolantite Mfg. Co., Stirling, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., LeRoy, N. Y. ADV. PG. 382, 383.
 Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.
 Louthan Mfg. Co., East Liverpool, Ohio.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Maryland Lava Co., Bel Air, Md.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 Mykroy, Inc., Wheeling, Ill.
 National Ceramic Co., 400 Southard St., Trenton 2, N. J.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Porcelain Products, Inc., Findlay, Ohio.
 Saxonburg Ceramics, Saxonburg, Pa.
SEALTRON CO., 9701 Reading Road, Cincinnati 15, Ohio. ADV. PG. 217.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
STEWART MFG. CO., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wisconsin Porcelain Co., Sun Prairie, Wis.

INSULATORS—Feeder Spreader

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Isolantite Mfg. Corp., Stirling, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., LeRoy, N. Y. ADV. PG. 382, 383.
 Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
STEWART MFG. CO., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

INSULATORS—Fused Quartz

Amersil Co., Inc., Hillside, N. J.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Hanovia Chemical & Mfg. Co., 233 N. J. RR Ave., Newark, N. J.
 Kemlite Labs., 1819 Grand Ave., Chicago 22, Ill.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Sincor Products Co., Malden, Mass.
 Thermal Syndicate, Ltd., 14 Bixley Heath, Lynbrook, N. Y.

INSULATORS—High Dielectric Paper

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
BAER CO., N. S., 9 Montgomery Ave., Hillside, N. J. ADV. PG. 107.
CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 345.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 290.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Integrated Mica Corp., 202 Franklin Place, Woodmere, N. Y.
 Maryland Lava Co., Bel Air, Md.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
 Rogers Corp., Manchester, Conn.
 Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.

INSULATORS—Strain

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CROWLEY & CO., INC., HENRY L., 1 Central West Orange, N. J. ADV. PG. 303.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio.
HEYMAN MFG. CO., Kenilworth 2, N. J. ADV. PG. 554.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Illinois Electric Porcelain Co., Macomb, Ill.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 Isolantite Mfg. Corp., Stirling, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., LeRoy, N. Y. ADV. PG. 382, 383.
 Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Porcelain Products, Inc., Findlay, Ohio.
 Saxonburg Ceramics, Saxonburg, Pa.
STEWART MFG. CO., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
 Wind Turbine Co., E. Market St. & Penna. R. R., Chester, Pa.

INSULATORS—Test Clip

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 American Radio Hardware Co., Inc., 152 MacQueen Pkwy., Mt. Vernon, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV. PG. 462.
 Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Island City, N. Y. ADV. PG. 535.
 Mueller Electric Co., 1583 E. 31st St., Cleveland 10, Ohio.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 1, N. Y.

INSULATORS—Thermocouple

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 11, Ill.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Isolantite Mfg. Co., Stirling, N. J.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Maryland Lava Co., Bel Air, Md.
 Mykroy, Inc., Wheeling, Ill.
 Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
 Saxonburg Ceramics, Saxonburg, Pa.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
STEWART MFG. CO., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn. ADV. PG. 495.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
 Thompson Co., H. I., 1733 Cordova St., Los Angeles 10, Calif.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. 453.

INSULATORS—Tower

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., LeRoy, N. Y. ADV. PG. 382, 383.
 Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.
 Mykroy, Inc., Wheeling, Ill.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 Wind Turbine Co., E. Market St. & Penna. R. R., Chester, Pa.

INSULATORS—Transmitting Antenna

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
CENTRAL LAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
Metco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Insulantite Mfg. Corp., Stirling, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
APP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., LeRoy, N. Y. ADV. PG. 382, 383.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Mykroy, Inc., Wheeling, Ill.
PHOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.

INTEGRATORS—Electronic

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
AMERICAN ELECTRONIC LABS., INC., 641 Arch St., Philadelphia 6, Pa. ADV. PG. 528.
Arma Corp., 254 36th St., Brooklyn 32, N. Y.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
COMPUTER CORP. OF AMERICA, 149 Church St., New York, N. Y. ADV. PG. 594.
DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
DIGITAL CONTROL SYSTEMS, INC., 7858 Ivanhoe, P. O. Box 779, La Jolla, Calif. ADV. PG. 566.
Din Co., Inc., 207 Main St., Worcester, Mass.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
Instron Engineering Corp., 2 Hancock St., Quincy 71, Mass.
Julijan Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
Maryland Lava Co., Bel Air, Md.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Hilbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 514.
Untronics, Inc., 472 Paul Ave., Ferguson Station, St. Louis 21, Mo.
Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

INTERCOMMUNICATION SYSTEMS

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
Cooper Electronic Products Co., 4500 Melrose St., Philadelphia 24, Pa.
Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
Executone Inc., 415 Lexington Ave., New York 17, N. Y.
Farmers Engineering & Mfg. Co., Irwin, Pa.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.
Gates Radio Co., Quincy, Ill.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 608.
Godfrey Mfg. Co., 2642 S. Madison Ave., Chicago, Ill.
International Television Corp., 238 William St., New York 38, N. Y.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.
Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
National Inter-Communication Systems, Inc., 1130 N. Milwaukee Ave., Chicago 22, Ill.
North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio.
Northeastern Engineering Inc., Manchester, N. H.
Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York 11, N. Y. ADV. PG. 418.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stromberg-Carlson Co., Rochester 3, N. Y.
Talk-A-Phone Mfg. Co., 1512 S. Pulaski Rd., Chicago 23, Ill.
Talk-O-Products, Inc., 163 St. Paul St., Rochester 6, N. Y.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
U. S. Instrument Corp., 409 Broad St., Summit, N. J.
Vocaline Co. of America, Inc., Old Saybrook, Conn.
Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
Webster Electric Co., 1900 Clark St., Racine, Wis.
Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.
Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.
Worner Electronic Devices, Rankin, Ill.

INTERCOMMUNICATION SYSTEMS—Sound Powered

U. S. Instrument Corp., 409 Broad St., Summit, N. J.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346.

INVERTERS

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. ADV. PG. 278.
Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 146.
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Bristol Co., The, Waterbury 20, Conn.
CARTER MOTOR CO., 2644 N. Maplewood Ave., Chicago 47, Ill. ADV. PG. 506.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. ADV. PG. 569.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
Doelcam Corp., 56 Elmwood Ave., Newton 58, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Holtzer-Cabot Div. of National Pneumatic Co., Inc., 125 Amory St., Boston 19, Mass.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
Leland Electric Co., The, Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio.
Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
NORRMAN LABORATORIES, ERNST, Williams Bay, Wis. ADV. PG. 620.
North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio.
ORTON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 569.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
Redmond Co., Inc., Elm St., Owosso, Mich.
Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
SOPHENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 62, 63.
Wilson Co., H. A., 2655 U. S. Hwy. 22, Unlon, N. J.
Winch-rger Corp., E. 7th & Division Sts., Slouax City, Iowa.

ION TRAPS

All Star Products, Inc., Defiance, Ohio.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, Ill. ADV. PG. 509.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
HEPPNER MFG. CO., P. O. Box 612, Round Lake, Ill. ADV. PG. 243.
Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, Ill.
Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
Quam-Nichols Co., Marquette Rd. & Prairie Ave., Chicago 37, Ill.

Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

IRONS—Soldering

American Electrical Heater Co., 6110 Cass Ave., Detroit 2, Mich.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Ill.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
Electric Soldering Iron Co., W. Elm St., Deep River, Conn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GOOD-ALL ELECTRIC MFG. CO., 112 W. First St., Ogallala, Neb. ADV. PG. 588.
Hexacon Electric Company, 130 W. Clay Ave., Roselle Park, N. J.
Ideal Industries, Inc., 5103 Park & Borden Aves., Sycamore, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Kelnor Mfg. Co., 222 Kearny St., San Francisco 8, Calif.
Kemode Mfg. Co., Inc., 161 W. 18th St., New York 11, N. Y.
Kwikheat Mfg. Co., 3732 San Fernando Road, Glendale 4, Calif.
LENK MFG. CO., 30 Cummington St., Boston 15, Mass. ADV. PG. 616.
Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stanley Works, The, 195 Lake St., New Britain, Conn.
Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
Ungar Electric Tools, Inc., 615 Ducommun St., Los Angeles 54, Calif.
VULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass. ADV. PG. 279.
Wall Mfg. Co., Grove City, Pa.
Weller Electric Corp., 846 Packer St., Easton, Pa.
Wen Products, Inc., 5806 Northwest Highway, Chicago 31, Ill.

JACKS

See Plugs and Jacks

JACK PANEL ASSEMBLIES

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 414.
Audio Equipment Sales, 153 W. 33rd St., New York 1, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.
Gates Radio Co., Quincy, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
Keystone Electronics Corp., 423 Broome St., New York 13, N. Y.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio.
Roffan Co., Corner Route 1 and Camp Meeting Rd., Topsfield, Mass.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Stromberg-Carlson Co., Rochester 3, N. Y.
SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. ADV. PG. 306.
TRIMM, INC., 400 W. Lake St., Libertyville, N. Y. ADV. PG. 600.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

JEWELS—Glass

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 61.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.

JOINTS—Rotary, Microwave

See **MICROWAVE ACCESSORIES**

JUMPERS—Bonding

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
 Whitaker Cable Corp., Kansas City 16, Mo.

KEYERS & COUPLERS

Boehme, Inc., H. O., 915 Broadway, New York 10, N. Y.
 Codeltyper Laboratories, 550 Fifth Ave., New York 19, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Erco Radio Labs. Inc., E. Stewart Ave., Garden City, N. Y.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Gates Radio Co., Quincy, Ill.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

KEYS & CODING EQUIPMENT

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Boehme Inc., H. O., 915 Broadway, New York 10, N. Y.
 Codeltyper Laboratories, 550 Fifth Ave., New York 19, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Vibroxplex Co., Inc., 833 Broadway, New York, N. Y.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

KILOVOLTMETERS

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 87.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Burlington Instrument Co., Burlington, Iowa.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FERRANTI ELECTRIC INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.

RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 592.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

KLYSTRONS

See **Tubes**

KNOBBS

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.
 Consolidated Molded Products Corp., Scranton 2, Pa.
 Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1, Ohio.
 Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Molding Corp. of America, 40 Church St., Pawtucket, R. I.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
 Pacific Transducer Corp., 11921 S.W. Pico Blvd., Los Angeles 64, Calif.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 426.
 Rohden Manufacturing Company, 4739 Montrose Ave., Chicago 41, Ill.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
WHITSO, INC., 2037 Churchill St., Chicago 47, Ill. ADV. PG. 169.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

LACQUER

See **Insulating Compounds**

LAMINATIONS—Transformer

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
 Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
 Burken Lamination Corp., 811 Whittier St., Bronx 59, N. Y.
 Cable Electric Products Co., Providence, R. I.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
KOBZY TOOL CO., 1535 N. Dayton Ave., Chicago 22, Ill. ADV. PG. 252.
 Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
TEMPEL MFG. CO., 1939 Bryn Mawr Ave., Chicago 26, Ill. ADV. PG. 440.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 254.

Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.
 Wake Electric Products Co., 400 Jacob St., Stus, Mich.

LEADS—Test

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Associated Engineering Corp. of Boston, 38 Euston Brighton 35, Mass.
 Autel Electronics Co., 1946 Farmingdale Rd., West Nyack, N. J.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Cable Electric Products Co., Providence, R. I.
 Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 10 Britannia St., Meriden, Conn. ADV. PG. 590.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw St., Los Angeles 8, Calif.
 Precision Apparatus Co., Inc., 92-27 Horace Harbo Blvd., Elmhurst, N. Y.
RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
 Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 Smith, Inc., Herman H., 436 18th St., Brooklyn, N. Y.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

LEAK

See **Detectors**

LEATHERETTE

APEX COATED FABRICS CO., 12 E. 22nd St., New York 10, N. Y. ADV. PG. 558.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Tire & Rubber Co., The, Akron, Ohio.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

LENSES—Optical

American Optical Co., Box A, Buffalo 15, N. Y.
 Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
 Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
 Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 3, Calif.
 Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
BURKE & JAMES INC., 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 418.
 Farrand Optical Co., Inc., Bronx Blvd. at 238th St., Bronx 70, N. Y.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 4, Calif.
 Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass.
 Maurer, Inc., J. A., 37-01 31st St., Long Island City 3, N. Y.
 Pacific Transducer Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
 Pennsylvania Optical Co., 234 S. 8th St., Reading 1, Pa.
 Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
 Polan Industries, Huntington 19, W. Va.
 Zenith Optical Laboratory, 1940 Great Neck Road, Copiague, N. Y.

LENSES—Television

American Optical Co., Box A, Buffalo 15, N. Y.
 Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
 Back Video Corp., F. G., 500 Fifth Ave., New York 11, N. Y.
 Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
BURKE & JAMES INC., 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 418.
 DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
 Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
 Kennedy & Co., D. S., Cohasset, Mass.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Pennsylvania Optical Co., 234 S. 8th St., Reading 2, Pa.
 Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
 Polan Industries, Huntington 19, W. Va.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Television Zoomar Corp., 500 Fifth Ave., Room 2223, New York, N. Y.

LENSES—Television Magnifying

American Optical Co., Box A, Buffalo 15, N. Y.
 Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
 Back Video Corp., F. G., 500 Fifth Ave., New York, N. Y.
 Television Zoomar Corp., 500 Fifth Ave., Room 2223, New York, N. Y.
 Willson Camera Co., Inc., 1401 Lawrence Rd., Haver-town, Pa.

LENSES—Television Projection

American Optical Co., Box A, Buffalo 15, N. Y.
 Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
 Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
 Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
 Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
 Hanovia Chemical & Mfg. Co., 233 N.J.R.R. Ave., Newark, N. J.
 Pennsylvania Optical Co., 234 S. 8th St., Reading 2, Pa.
 Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
 Polan Industries, Huntington 19, W. Va.
 Viewlex, Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.
 Willson Camera Co., Inc., 1401 Lawrence Rd., Haver-town, Pa.

LIE DETECTORS—Electronic

Associated Research, Inc., 3788 W. Belmont Ave., Chi-cago 18, Ill.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.

LIGHTS—Dial, Panel and Pilot

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 American Electronics Corp., 157 Marconi Blvd., Colum-bus, Ohio.
BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Carling Electric, Inc., 499 Park Ave., West Hartford 10, Conn.
CIRCUIT CRAFT ASSOCIATES, 5827 E. Beverly Blvd., Los Angeles 22, Calif. ADV. PG. 623.
DIALIGHT CORPORATION, 60 Stewart Ave., Brooklyn 37, N. Y. ADV. PG. 348.
DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 61.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Electric Co., Lamp Div., Nela Park, Cleveland 12, Ohio.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
 Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.
 Hetherington, Inc., Sharon Hill, Pa.
 Hudson Lamp Co., 528 Elm St., Arlington, N. J.
 Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 Kirkland Co., H. R., 8 King St., Morristown, N. J.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
 Marco Industries Co., 207 S. Helena St., Anaheim, Calif.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL CARBON CO., Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 331.

North American Electric Lamp Co., 1014 Tyler St., St. Louis 6, Mo.
OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chi-cago 15, Ill. ADV. PG. 602.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Stromberg-Carlson Co., Rochester 3, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 128.
UCINITE CO., DIV. OF UNITED CARR-FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.

LIGHTS—Photoelectric Source

Alrmeec, Ltd., High Wycombe, Buckinghamshire, England.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 Electrical Service Co., 1271 Mission St., San Fran-cisco, Calif.
 Electronic Control Corp., 1573 E. Forest St., Detroit Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.
 Hudson Lamp Co., 528 Elm St., Arlington, N. J.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
 Worner Electronic Devices, Rankin, Ill.

LIGHTS—Signal

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn.
 Cable Electric Products Co., Providence, R. I.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
DIALIGHT CORPORATION, 60 Stewart Ave., Brooklyn 37, N. Y. ADV. PG. 348.
DRAKE MFG. CORP., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 61.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
 Hanovia Chemical & Mfg. Co., 233 N. J. R. R. Ave., Newark, N. J.
 Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 Kemlite Labs., 1819 Grand Ave., Chicago 22, Ill.
 Kirkland Co., H. R., 8 King St., Morristown, N. J.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
 North American Electric Lamp Co., 1014 Tyler St., St. Louis 6, Mo.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.

LIGHTS—Stroboscopic Source

Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
 Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-bridge 39, Mass. ADV. PG. 90, 91.
 Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.
 Kemlite Labs., 1819 W. Grand Ave., Chicago 22, Ill.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

LINES—Slotted

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. J.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Federal Telecommunication Labs, Inc., 500 Washington Ave., Nutley, N. J.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Ferris Instrument Co., 110 Cornelia St., Boonton, N. J.

GENERAL RADIO CO., 275 Massachusetts Ave., Cam-bridge 39, Mass. ADV. PG. 90, 91.
HEWLETT-PACKARD CO., 395 Page Mill Road, Palo Alto, Calif. ADV. PG. 29-34.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Rollin Co., 2010 N. Lincoln Ave., Pasadena 3, Calif.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

LINKS—Antenna

DORNE AND MARGOLIN, 30 Sylvester St., Westbury, N. Y. ADV. PG. 569.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburg 19, Pa.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
PRODELIN, INC., 307 Bergen Ave., Kearny, N. J. ADV. PG. 306.

LIQUID LEVEL

See Controls Indicators

LITHIUM COMPOUNDS

See Metals

LOADS—Dummy

See Antennas, Dummy Load

LOCATORS—Cable & Line Fault

PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 614.
 Radar Engineers, 110 University St., Seattle, Wash.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.

LOCATORS—Pipe & Cable

Detectron Co., 5631 Cahuenga Blvd., North Hollywood, Calif.
 Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.
 Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.

LOCKS—Dial

AUGAT BROS., INC., 33 Perry Ave., Attleboro, Mass. ADV. PG. 537.
 Bud Radio, Inc., 2119 E. 55th St., Cleveland 3, Ohio.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.

LOCKS—Shaft

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
IPPOLITO & CO., JAMES, 401 Concord Ave., Bronx 54, N. Y. ADV. PG. 320.
JAN HARDWARE MFG. CO., INC., 25-30 163rd St., Flushing 58, N. Y. ADV. PG. 567.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
PRECISION METAL PRODUCTS CO. OF MALDEN, 41 Elm St., Stoneham 80, Mass. ADV. PG. 475.
 Standard Locknut & Lockwasher, Inc., 510 N. Capitol Ave., Indianapolis 4, Ind.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.

LORAN SYSTEMS

Bludworth Marine Div., National Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.

LUGS

See Terminals

MACHINES—Bending

American Industrial Specialties Co., 1047 E. 76th St., Chicago, Ill.
 Leonard Precision Products Co., Larsen Ave., Garden Grove, Calif.
 O'Neil-Irwin Mfg. Co., 316 Eighth Ave., Lake City, Minn.
 RADIO RECEPTOR CO., INC., 251 W. 19th St., New York 11, N. Y. ADV. PG. 434, 435.
 S & S Machinery Co., 140 53rd St., Brooklyn, N. Y.

MACHINES—Blueprint

American Photocopy Equipment Co., 2849 N. Clark St., Chicago, Ill.
 Bruning Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.
 Paragon-Revolute Corp., 71 S. Seventh Ave., Rochester 4, N. Y.
 Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, Ill.
 Peck & Harvey, 5650 N. Western Ave., Chicago 45, Ill.

MACHINES—Coil Winding

ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. ADV. PG. 515.
 Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
 Boesch Mfg. Co., Danbury, Conn.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
 COIL WINDING EQUIPMENT CO., 109 Audrey Ave., Oyster Bay, N. Y. ADV. PG. 218.
 Cosa Corp., 405 Lexington Ave., New York 17, N. Y.
 EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 UNIVERSAL WINDING CO., P. O. Box 1605, Providence 1, R. I. ADV. PG. 280.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

MACHINES—Coil Winding, Toroidal

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
 Boesch Mfg. Co., Danbury, Conn.
 Cosa Corp., 405 Lexington Ave., New York 17, N. Y.
 Harder Co., Donald C., 3338 India St., San Diego, Calif.
 MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 228.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.

MACHINES—Counting (Photoelectric)

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Detectron Co., 5631 Cahuenga Blvd., North Hollywood, Calif.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

MACHINES—Crystal Manufacturing & Finishing

Basset, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
 CONSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 125.
 Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
 Vacuum Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.

MACHINES—Cutting

Artos Engineering Co., 2737 S. 28th St., Milwaukee, Wis.
 Barber-Colman Co., Rockford, Ill.
 Clark-Aitken Co., Lee, Mass.

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 Linde Air Products Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 O'Neil-Irwin Mfg. Co., 316 Eighth Ave., Lake City, Minn.
 Stanley Works, 195 Lake St., New Britain, Conn.
 Stokes Machine Co., F. J., 5950 Tabor Rd., Olney P. O., Philadelphia 20, Pa.

MACHINES—Disc Recording

Scully Machine Co., 62 Walter St., Bridgeport, Conn.

MACHINES—Electric Soldering

Cole Radio Works, 86 Westville Ave., Caldwell, N. J.
 EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.

MACHINES—Electronic Balancing

Annis Co., R. B., 1101 North Delaware St., Indianapolis, Ind.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gisholt Machine Co., 1245 E. Washington Ave., Madison 3, Wis.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Micro Balancing, Inc., 191 Herricks Rd., Garden City Park, N. Y.

MACHINES—Electronic Computing

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 Arna Corp., 254 36th Ct., Brooklyn 32, N. Y.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 BURROUGHS CORP., Electronic Instruments Div., 511 N. Broad St., Philadelphia 23, Pa. ADV. PG. 211-214.
 COMPUTER CORP. OF AMERICA, 149 Church St., New York, N. Y. ADV. PG. 594.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.
 DIGITAL CONTROL SYSTEMS, INC., 7858 Ivanhoe, P. O. Box 779, La Jolla, Calif. ADV. PG. 566.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul, Minn.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
 Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Rutherford Electronics Corp., 3707 S. Robertson Blvd., Culver City, Calif.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

MACHINES—Electronic Dictating

Dictaphone Corp., 420 Lexington Ave., New York 17, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 SoundScriber Corp., 146 Munson St., New Haven 4, Conn.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

MACHINES—Electronic Transcribing

Dictaphone Corp., 420 Lexington Ave., New York 17, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 SoundScriber Corp., 146 Munson St., New Haven 4, Conn.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.

MACHINES—Engraving and Profiling

Auto Engraver Co., Ridgefield, Conn.

Gaertner Scientific Corp., 1239 Wrightwood Ave., Chicago 14, Ill.
 GREEN INSTRUMENT CO., 363A Putnam Ave., Cambridge, Mass. ADV. PG. 564.
 Ideal Industries, Inc., 5103 Park & Borden A Sycamore, Ill.
 MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 228.
 NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 627.
 Preis Engraving Machine Co., 649 Highway 29, Hillside, N. J.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville, Mass.
 U. S. Stoneware Co., The, Akron 9, Ohio.

MACHINES—Glass Blowing

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 KAHLE ENGINEERING CO., 1350 Seventh St., New Bergen, N. J. ADV. PG. 417.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.

MACHINES—Forming

Martindale Electric Co., Edgewater Branch, Box 6 Cleveland 7, Ohio.
 O'Neil-Irwin Mfg. Co., Inc., 316 Eighth Ave., Lake City, Minn.
 Thor Manufacturers, 2420 Atlantic Ave., Brooklyn, N. Y.

MACHINES—Glass Working

EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
 Forter-Teichmann Co., Clark Bldg., Pittsburgh, Pa.
 Haydu Brothers, Plainfield, N. J.
 KAHLE ENGINEERING CO., 1350 Seventh St., New Bergen, N. J. ADV. PG. 417.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 PIONEER MACHINE WORKS, 6136 Adam St., West Nyack, N. J. ADV. PG. 613.
 Sommer & Maca Glass Machine Co., 3600 S. Oakley Ave., Chicago 9, Ill.
 Stewart-Speller Associates, Soquel, Calif.

MACHINES—Impregnating

Barrett Co., Leon J., P. O. Box 378, Worcester, Mass.
 Production Engineering Co., 173 Sargeant Ave., Clifton, N. J.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.

MACHINES—Instrument Shock Testing

FINN & CO., INC., T. R., 333 Jackson Ave., New York 54, N. Y. ADV. PG. 623.

MACHINES—Marking

Ackerman-Gould Co., 92 Bleecker St., New York, N. Y.
 Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
 Coxhead Co., Ralph C., Newark, N. J.
 Kingsley Mfg. Co., Berkeley, Calif.
 Markem Machine Co., Keene, N. H.
 MARKWIK MFG. CO., INC., 2270 Bruckner Blvd., Bronx 61, N. Y. ADV. PG. 554.
 Matthews Co., James H., 470 Atlantic Ave., Boston 1, Mass.
 Noble & Westbrook Mfg. Co., 27 Westbrook St., East Hartford 8, Conn.
 Popper & Sons, Inc., 300 Fourth Ave., New York 1, N. Y.
 PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
 Preis Engraving Machine Co., 649 Highway 29, Hillside, N. J.
 Schmidt, Inc., George T., 4100 Ravenswood Ave., Chicago 13, Ill.

MACHINES—Photocopy & Whiteprint

American Photocopy Equipment Co., 2849 N. Clark St., Chicago, Ill.
 Bruning & Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.
 Haloid Co., The, 6 Haloid St., Rochester, N. Y.
 Ozalid Div. of General Aniline & Film Corp., 770 Anson Rd., Johnson City, N. Y.
 Paragon-Revolute Corp., 71 S. Chester Ave., Rochester 4, N. Y.
 Peck & Harvey, 5650 N. Western Ave., Chicago 45, Ill.

MACHINES—Record Manufacturing

Alden Systems, Inc., Alden Research Center, Westboro, Mass.
 Poinsetta Co., Inc., 112 Cedar Ave., Pitman 6, N. J.

MACHINES—Shock Testing

BARRY CORP., 711 Pleasant St., Watertown 72, Mass. ADV. PG. 71.

Computing Devices of Canada, Ltd., 338 Queen St.,
Ottawa 4, Ontario.
Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
FINN & CO., INC., T. R., 333 Jackson Ave., New York
54, N. Y. ADV. PG. 623.
Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
Lulton Mfg. Corp., Metuchen, N. J.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit
10, Mich.
A. B. Corp., 31 Union Place, Summit, N. J.

MACHINES—Tube Manufacturing

ESLER ENGINEERING CO., INC., 740 S. 13th St., New-
ark 3, N. J. ADV. PG. 332.
Entwistle Co., James L., P. O. Box 176, Providence 7,
R. I.
Haydu Brothers, Plainfield, N. J.
KAHLE ENGINEERING CO., 1350 Seventh St., North
Bergen, N. J. ADV. PG. 417.
PIONEER MACHINE WORKS, 6136 Adam St., West New
York, N. J. ADV. PG. 613.
RADIO CORP. OF AMERICA, Tube Dept., Harrison,
N. J. ADV. PG. 295, Inside Back & Back Covers.
Stewart-Speller Associates, Soquel, Calif.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broad-
way, New York 19, N. Y. ADV. PG. 654-660.

MACHINES—Vibration Fatigue Testing

ELECTRO-MEC LABORATORY, 120 43rd Ave., Long
Island City, N. Y. ADV. PG. 486.
Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
FINN & CO., INC., T. R., 333 Jackson Ave., New York
54, N. Y. ADV. PG. 623.
Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit
10, Mich.
L. A. B. Corp., 31 Union Place, Summit, N. J.
M B MFG. CO., 1060 State St., New Haven 11, Conn.
ADV. PG. 574.
Phordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.

MACHINES—Wire Stripping

All American Tool & Mfg. Co., 8027 Lawndale, Skokie,
Ill.
Artos Engineering Co., 2737 S. 28th St., Milwaukee,
Wis.
Associated Production Co., 162 N. Clinton St., Chicago
6, Ill.
Electro Wire Service, 5 Beekman St., New York 7,
N. Y.
High Speed Hammer Co., Rochester, N. Y.
Holub Industries, Inc., 414 DeKalb Ave., Sycamore, Ill.
Ideal Industries, Inc., Park & Borden Aves., Sycamore,
Ill.
P C A ELECTRONICS INC., 2180 Colorado Ave., Santa
Monica, Calif. ADV. PG. 580, 581.
Rush Wire Stripper Div., Eraser Co., Inc., 1068 S.
Clinton St., Syracuse 4, N. Y.
Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W. C. 2, England.
Wire Stripper Co., 1730 Eastham Ave., Cleveland, Ohio.

MAGNETIC ANALYSIS EQUIPMENT

Cambridge Instrument Co., Inc., 3805 Grand Central
Terminal, New York 17, N. Y.
Dice Co., J. W., Englewood, N. J.
Dyna Labs, Inc., 1075 Stewart Ave., Garden City, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
Magnetic Analysis Corp., 42-44 12th St., Long Island
City 1, N. Y.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter
St., Cambridge 42, Mass. ADV. PG. 592.

MAGNETIZERS AND DEMAGNETIZERS

AMPEX ELECTRIC CORP., 934 Charter St., Redwood
City, Calif. ADV. PG. 94, 95.
Annis Co., R. B., 1101 N. Delaware St., Indianapolis,
Ind.
Bright Radio Labs, Inc., 24-28 45th St., Long Island
City 3, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A,
Los Angeles 15, Calif.
Consolidated Radio Products Co., 350 W. Erie St.,
Chicago 10, Ill.
DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Ideal Industries, Inc., Park & Borden Aves., Sycamore,
Ill.
Klein-Electronics, Leo, 2404 S. La Brea Ave., Los
Angeles 16, Calif.
Luma Electric Equipment Co., P. O. Box 132, Toledo 1,
Ohio.
Magnaflux Corp., 5900 Northwest Hwy., Chicago 31,
Ill.
Magnetic Analysis Corp., 42-44 12th St., Long Island
City 1, N. Y.
Martindale Electric Co., Edgewater Branch, Box 617,
Cleveland 7, Ohio.
Minnesota Electronics Corp., 47 W. Water St., St. Paul
1, Minn.

Omega Mfg. Co., 40 Hudson St., New York, N. Y.
OPAD-GREEN CO., 71-5 Warren St., New York 7,
N. Y. ADV. PG. 479.
PERMAG CORP., 214 Taaffe Place, Brooklyn 5, N. Y.
ADV. PG. 496.
PRESTO RECORDING CORP., Paramus, N. J. ADV.
PG. 271.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J.
ADV. PG. 512.
Sclaky Bros., Inc., 4915 W. 67th St., Chicago 38,
Ill.

MAGNETOMETERS

See Instruments—Electrical Measuring

MAGNETRONS

See Tubes

MAGNETS—Permanent

ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG.
180-186.
CARBOLOY, DEPT. OF GENERAL ELECTRIC CO., 11139
E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 20.
Consolidated Radio Products Co., 350 W. Erie St.,
Chicago 10, Ill.
CROWLEY & CO., INC., HENRY L., 1 Central Ave.,
West Orange, N. J. ADV. PG. 303.
CRUCIBLE STEEL CO. OF AMERICA, 405 Lexington
Ave., New York 17, N. Y. ADV. PG. 337.
General Magnetic Corp., 10001 Erwin Ave., Detroit 34,
Mich.
INDIANA STEEL PRODUCTS CO., Valparaiso, Indiana.
ADV. PG. 124.
Little, Inc., Arthur D., Cambridge, Mass.
Mullard Overseas Ltd., Century House, Shaftesbury Ave.,
London, W. C. 2, England.
Murex Ltd., Rainham, Essex, England.
PERMAG CORP., 214 Taaffe Place, Brooklyn 5, N. Y.
ADV. PG. 496.
RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill.
ADV. PG. 136.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E.
23rd St., Indianapolis, Ind. ADV. PG. 254.
VARIAN ASSOCIATES, 990 Varian St., San Carlos,
Calif. ADV. PG. 392, 393.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-
cago 10, Ill.

MARKERS—Frequency, Microwave

See MICROWAVE ACCESSORIES

MARKERS—Wire

Acromark Company, The, 9-13 Morrell St., Elizabeth
4, N. J.
Actioncraft Products, 8 Sagamore Hill Drive, Port Wash-
ington, N. Y.
Brady Co., W. H., 727 W. Glendale Ave., Milwaukee
12, Wis.
BRAND & CO., INC., WILLIAM, North & Valley Sts.,
Willimantic, Conn. ADV. PG. 308, 309.
Duramark, Inc., 2 Secatog Ave., Port Washington, N. Y.
Empire Electronics Co., Inc., 166 River St., Paterson
1, N. J.
Markem Machine Co., Keene, N. H.
Matthews & Co., James H., 470 Atlantic Ave., Boston
10, Mass.
NORTH SHORE NAMEPLATE CO., 209-14 41 Ave.,
Bayside 61, N. Y. ADV. PG. 608.
Rocket Distributors, Inc., 209-14 41 Ave., Bayside 61,
N. Y.
Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave.,
Gardena, Calif.
Westline Products Div. of Western Lithograph Co., 600
E. Second St., Los Angeles, Calif.

MARKING STAMPS

See Stamps—Marking

MASKS—Television

BIRNBACH RADIO CO., INC., 145 Hudson St., New
York 13, N. Y. ADV. PG. 581.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn
N. Y. ADV. PG. 258, 623.
Precision Plastic Products Inc., 628-30 W. Lake St.,
Chicago 6, Ill.

MECHANICAL TOOLS

See Tools—Hand or Mechanical

MEGAPHONES—Electronic

Audio Equipment Co., Inc., 805 Middle Neck Rd.,
Great Neck, N. Y.
Brelco Electronics Corp., 55 Vandam St., New York 13,
N. Y.

MEGOHMMETERS

See Instruments—Electrical Measuring

MEGOHMMETERS—Vacuum Tube

Associated Research, Inc., 3788 W. Belmont Ave., Chi-
cago 18, Ill.
Bendix Aviation Corp., 203 W. Third St., Cincinnati
2, Ohio.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond
St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleve-
land 14, Ohio. ADV. PG. 374, 375.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A,
Los Angeles 15, Calif.
COMMUNICATION MEASUREMENTS LAB., INC., 350
Leland Ave., Plainfield, N. J. ADV. PG. 524.
Feiler Engineering Co., 8026 N. Monticello Ave., Skokie,
Ill.
FRED TRANSFORMER CO., INC., 1736 Weirfield St.,
Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
bridge 39, Mass. ADV. PG. 90, 91.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleve-
land 15, Ohio. ADV. PG. 72.
MacLeod & Hanopol, Inc., 10 Roland St., Charlestown
29, Mass.
Southwestern Industrial Electronics Co., 2831 Post Oak
Rd., P. O. Box 13058, Houston 19, Texas.
STICHT CO., INC., HERMAN H., 27 Park Place, New
York 7, N. Y. ADV. PG. 627.
Triplett Electrical Instrument Co., Harmon Road, Bluff-
ton, Ohio.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METAL CONES, TELEVISION

See Cones, Metal Television

METALLIC OXIDE

See Rectifiers

METAL PARTS—Bushings

American Radio Hardware Co., Inc., 152 MacQueston
Pkwy., Mt. Vernon, N. Y.
Bennett Mfg. Co., Alden, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Chase Brass & Copper Co., Inc., 236 Grand St., Water-
bury 20, Conn.
CITATION PRODUCTS CO., 233 E. 146th St., New
York 51, N. Y. ADV. PG. 618.
General Laminated Products, Inc., 2857 S. Halstead St.,
Chicago 8, Ill.
I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12,
Ill.
INSULINE CORP., OF AMERICA, 36-02 35th Ave.,
Long Island City, N. Y. ADV. PG. 535.
Johnson Engineering Co., Inc., Welton V., 95 Summit
Ave., Summit, N. J.
Keystone Carbon Co., Inc., Saint Marys, Pa.
Keystone Electronics Corp., 423 Broome St., New York
12, N. Y.
Master Appliance Mfg. Co., Fourth & Ontario Sts.,
Racine, Wis.
Northfield-Linden Corp., 147 Ocean Ave., Lynbrook,
N. Y.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J.
ADV. PG. 224.
Powdered Metal Products Corp., Franklin Park, Ill.
St. Marys Carbon Co., State Rd., St. Marys, Pa.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15,
N. Y.
United Shoe Machinery Corp., 140 Federal St., Boston
7, Mass.
U. S. Graphite Co., Div. of The Wickes Corp., 1621
Holland Ave., Saginaw, Mich.

METAL PARTS—Castings

Alleghany Ludium Steel Corp., HW Oliver Bldg., Pitts-
burgh 22, Pa.
Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19,
Pa.
Arwood Precision Casting Corp., 70 Washington St.,
Brooklyn, N. Y.
CELCO CONSTANTINE ENGINEERING LABORATORIES
CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
Dollin Corp., 600 S. 21st St., Irvington 11, N. J.
Engineered Precision Casting Co., Box 68, Matawan,
N. J.
Gries Reproducer Corp., 100 Willow Ave., New York 54,
N. Y.
I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12,
Ill.
Investment Casting Co., 319 Chestnut St., Newark 5,
N. J.
Michigan Steel Casting Co., Microstat Div., Detroit, Mich.
Mt. Vernon Die-Casting Corp., 118 Pearl St., Mt. Ver-
non, N. Y.
Precision Metalsmiths, Inc., 1087 E. 200 St., Cleveland
17, Ohio.

METAL PARTS—Contacts

See Contacts, Electrical

METAL PARTS—Deep-drawn

American Aluminumware Co., 378 Jelliff Ave., Newark 8, N. J.
HELDOR MFG. CO., DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
HUDSON TOOL & DIE CO., 118 S. 14th St., Newark, N. J. ADV. PG. 325.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 369.
 Keystone Watchcase Co., Riverton, N. J.
OLYMPIC METAL PRODUCTS CO., INC., Phillipsburg, N. J. ADV. PG. 168.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
 Worcester Pressed Steel Co., 101 Barber St., Worcester 6, Mass.
 Worcester Stamped Metal Co., 8 Hunt St., Worcester 4, Mass.
 Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.

METAL PARTS—Laminated

Bennett Mfg. Co., Alden, N. Y.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Gleason-Avery, Inc., Auburn, N. Y.
 I. E. Manufacturing, 325 N. Hoynes Ave., Chicago 12, Ill.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
METAL PARTS—Lead
ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 I. E. Manufacturing, 325 N. Hoynes Ave., Chicago 12, Ill.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 564.
 U. S. Stoneware Co., The, Akron, Ohio.

METAL PARTS—Powdered

Allegheny Ludlum Steel Corp., HW Oliver Bldg., Pittsburgh 22, Pa.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Keystone Carbon Co., Inc., Saint Marys, Pa.
MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 591.
 Powdered Metal Products Corp., Franklin Park, Ill.
RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 136.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 St. Marys Carbon Co., State Rd., St. Marys, Pa.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 U. S. Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

METAL PARTS—Screw Machine

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 American Hinge Corp., 206 Wallabout St., Brooklyn 6, N. Y.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.
 Atlas Screw & Specialty Co., 450 Broome St., New York 13, N. Y.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Blake & Johnson Co., 1495 Thomaston Ave., Waterville 48, Conn.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Dante Electric Mfg. Co., Bantam, Conn.
 Eastern Specialty Co., Philadelphia 40, Pa.
ELASTIC STOP NUT CORP., 2330 Vauxhall Rd., Union, N. J. ADV. PG. 335.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
 Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.

Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
 Formica Co., 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Gleason-Avery, Inc., Auburn, N. Y.
GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 274.
 Gorrell & Gorrell, Haworth, N. J.
 Haydu Brothers, Plainfield, N. J.
HELDOR MFG. CO., DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 I. E. Manufacturing, 325 N. Hoynes Ave., Chicago 12, Ill.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 532.
 Instrument Parts Corp., P. O. Box 150, Ossining, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
 Kenwood Engineering Co., Inc., 265 Colfax Ave., Kenilworth, N. J.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
 Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee, Wis.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Mykro, Inc., Wheeling, Ill.
 National Screw & Mfg. Co., The, Cleveland 4, Ohio.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 332.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 Northfield Linden Corp., 147 Ocean Ave., Lynbrook, N. Y.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Pfeiffer Products, 3901 W. 54th St., Los Angeles, Calif.
 Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 532.
PRECISION METAL PRODUCTS CO. OF MALDEN, 41 Elm St., Stoneham 80, Mass. ADV. PG. 475.
 Quaker City Gear Works, Red Lion & Philmont Rd., Bethayres, Pa.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
RESEARCH DEVELOPMENT MANUFACTURE, 429 E. Collom St., Philadelphia 44, Pa. ADV. PG. 508.
RESISTOFLEX CORP., 39 Plansoen St., Belleville, N. J. ADV. PG. 583.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Rostan Corp., 5660 59th St., Maspeth 78, N. Y.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Scovill Manufacturing Co., Waterbury 20, Conn.
 Screw Corp. of America, 103 Park Ave., New York 17, N. Y.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
 United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 Vallorbs Jewel Co., Lancaster, Pa.
 Wall Mfg. Co., Grove City, Pa.

METAL PARTS—Small Metal Stampings

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
 Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
 Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Allegheny Ludlum Steel Corp., HW Oliver Bldg., Pittsburgh 22, Pa.
ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 American Nut & Bolt Fastener Co., 2045 Doerr St., Pittsburgh 33, Pa.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Anderson & Sons, Inc., Westfield, Mass.

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
AUGAT BROS., INC., 33 Perry Ave., Attleboro, Mass. ADV. PG. 537.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn 7, N. Y.
 Bennett Mfg. Co., Alden, N. Y.
BRAUN TOOL & INSTRUMENT CO., INC., H. 10 Fifth Ave., Hawthorne, N. J. ADV. PG. 346.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Burken Lamination Corp., 811 Whittier St., Bronx 10, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
 Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
CELCO CONSTANTINE ENGINEERING LABORATORY, 100 Island Ave., Mahwah, N. J. ADV. PG. 470.
CHURCHILL CORP., 844 Franklin St., Melrose 76, N. Y. ADV. PG. 446.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Columbia Metal Box Co., 260 E. 143rd St., New York 17, N. Y.
CONNECTICUT TELEPHONE & ELECTRIC CORP., Britannia St., Meriden, Conn. ADV. PG. 590.
 Craft Mfg. Co., 3949 W. Schubert St., Chicago, Ill.
 Cutler Metal Products Co., 1025 Line St., Canton, N. J.
 Dante Electric Mfg. Co., Bantam, Conn.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 17, N. Y.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
DOLIN METAL PRODUCTS, INC., 315 Lexington Ave., Brooklyn 16, N. Y. ADV. PG. 614.
DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 61.
 Eastern Specialty Co., Philadelphia 40, Pa.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
 Elco Corporation, 90 W. Glenwood Ave., Philadelphia 40, Pa.
 Electro Craft Inc., 68 Jackson St., Stamford, Conn.
 Electronic Mfg. Co., 20 Orange St., Newark, N. J.
 Eltran Corp., St. Anne, Ill.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
 Federal Tool & Mfg. Co., 3600 Alabama Ave., St. Louis 16, Minn.
 Formatic Co., 178 Bridge St., Naugatuck, Conn.
 Fryling Mfg. Co., 639 W. 12th St., Erie, Pa.
 Gale Dorothea Mechanisms Inc., 81-01 Broadway, Elmhurst, N. Y.
 Garrett Co., Inc., George K., D and Tloga Sts., Philadelphia 34, Pa.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Gleason-Avery, Inc., Auburn, N. Y.
GOAT CO., INC., FRED, 308 Dean St., Brooklyn 11, N. Y. ADV. PG. 557.
 Hayden Mfg. Co., 173 N. Peoria, Chicago 7, Ill.
 Haydu Brothers, Plainfield, N. J.
HELDOR MFG. CO., Div. of Helder Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
HEYMAN MFG. CO., Kenilworth 2, N. J. ADV. PG. 554.
 Hobson Brothers, 4049 W. Fullerton St., Chicago 13, Ill.
 I. E. Manufacturing, 325 N. Hoynes Ave., Chicago 12, Ill.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 532.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Javex, P. O. Box 646, Redlands, Calif.
JOHNSON & HOFFMAN MFG. CO., 31 E. Second St., Mineola, N. Y. ADV. PG. 358, 359.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 369.
 Kenwood Engineering Co., Inc., 265 Colfax Ave., Kenilworth, N. J.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 King Laboratories, Inc., 127 Solar St., Syracuse 4, N. Y.
 Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, Ill. ADV. PG. 571.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Metro, Inc., R. I., 230 Toronto Ave., Providence 1, R. I.
 Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, Ill.
 Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee, Wis.
 Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 332.
Northern Metal Products Co., 3300 W. Lake St., Chicago 24, Ill.
OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.
SPATTON-MACGUYER CO., 17 Virginia Ave., Providence 5, R. I. ADV. PG. 594.
Paul & Beekman Inc., 1801 Cortland St., Philadelphia 40, Pa.
Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
PRECISION METAL PRODUCTS CO. OF MALDEN, 41 Elm St., Stoneham 80, Mass. ADV. PG. 475.
Quadrige Mfg. Co., 213 W. Grand Ave., Chicago 11, Ill.
Radio Products Co., 2911E W. Carroll Ave., Chicago 12, Ill.
Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
Reynolds Metals Co., 2000 S. 9th St., Louisville, Ky.
Riverside Metal Co., The, Riverside, N. J.
Romac Products Co., 48-01 25th Ave., Long Island City 3, N. Y.
Rostan Corp., 5660 59th St., Maspeth 78, N. Y.
Sandsteel Spring Div., Sandvik Steel, Inc., 145 Hudson St., New York 13, N. Y.
Scovill Manufacturing Co., Waterbury 20, Conn.
Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.
Shore Engineering Inc., 232 West Ave., Long Branch, N. J.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
Stanley Works, The, 195 Lake St., New Britain, Conn.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 564.
TAVER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 353.
Teinen Co., William, 43 Bruen St., Newark 5, N. J.
Stewart Stamping Co., 630 Central Park Ave., Yonkers 4, N. Y.
Timpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
PYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.
Electronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.
Torgren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
TRICINITE CO., Div. of United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.
UNITED CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 399.
United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.
United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.
Universal Chain Co., 92 Burnett Ave., Maplewood, N. J.
VOLKERT METAL STAMPINGS INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 595.
Vade Electric Products Co., 400 Jacob St., Sturgis, Mich.
Vall Mfg. Co., Grove City, Pa.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 262.
WECKESSER CO., 5261 Avondale Ave., Chicago 30, Ill. ADV. PG. 568.
Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.
Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester 3, Mass.
Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.
Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.
Merick Mfg. Corp., Beechwood and Rockdale Aves., New Rochelle, N. Y.

METAL PARTS—Spinnings

All Metal Products, 206 McWhorter St., Newark 5, N. J.
Alpha Electronics, Inc., Route 17, Ramsey, N. J.
Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
Electronic Mfg. Co., 20 Orange St., Newark, N. J.
Raydu Brothers, Plainfield, N. J.
E. Manufacturing, 325 N. Hoynes Ave., Chicago 12, Ill.

KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 369.
Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
Newark Spinning & Stamping Co., 472 Bloy St., Hillside, N. J.
Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
Teiner Co., Inc., Roland, 134 Tremont St., Everett 49, Mass.
Torgren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.

METAL PARTS—Trimmings

Alpha Electronics, Inc., Route 17, Ramsey, N. J.
Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
Bennett Mfg. Co., Alden, N. Y.
Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
I. E. Manufacturing, 325 N. Hoynes Ave., Chicago 12, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
Screw Corp. of America, 103 Park Ave., New York 17, N. Y.
Torgren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.

METALLIC PAINTS

See Paints

METALS

Alnico

ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 180-186.
CARBOLOY, DEPT. OF GENERAL ELECTRIC CO., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 20.
INDIANA STEEL PRODUCTS CO., Valparaiso, Ind. ADV. PG. 124.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
PERMAG CORP., 214 Taaffe Place, Brooklyn 5, N. Y. ADV. PG. 496.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 254.

Aluminum

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
FEDERATED METALS DIV. AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

Antimony

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
FEDERATED METALS DIV. AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.

Barium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
King Laboratories, Inc., 127 Solar St., Syracuse 4, N. Y.

Beryllium and Beryllium Alloys

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Beryllium Corp., The, Reading, Pa.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Brush Beryllium Co., The, 4301 Perkins Ave., Cleveland 3, Ohio.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
Riverside Metal Co., The, Riverside, N. J.
Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.

Brass and Bronze

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.
FEDERATED METALS DIV., AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.
Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
Scovill Manufacturing Co., Waterbury 20, Conn.

Cadmium

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
FEDERATED METALS DIV., AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.
SEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville 9, N. J. ADV. PG. 593.

Cesium Compounds

(For Photo-tubes)

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Dow Chemical Co., Midland, Mich.
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
King Laboratories, Inc., 127 Solar St., Syracuse 4, N. Y.

Chromium

ALLOY METAL WIRE CO., 13th & Penna Ave., Prospect Park, Pa. ADV. PG. 526.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Electro Metallurgical Co., A Div. of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
SEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville 9, N. J. ADV. PG. 593.

Cobalt

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42, Mass.

Coefficient Metals

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.

Columbium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.

Copper

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Bridgeport Brass Co., 30 Grant St., Bridgeport, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
FEDERATED METALS DIV., AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42, Mass.

Electric Sheets—See Steel, Electric

Foil-Aluminum, Tin & Lead

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Johnston Foil Mfg. Co., 6100 S. Broadway, St. Louis 11, Mo.
 REPUBLIC FOIL & METAL MILLS, INC., 55 Triangle St., Danbury, Conn. ADV. PG. 566.
 Reynolds Metals Co., 2000 S. 9th St., Louisville, Ky.

Gold and Gold Alloys

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Handy & Harman, 82 Fulton St., New York 38, N. Y.
 MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Metz Refining Co., 369 Mulberry St., Newark 2, N. J.
 NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
 SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 402.
 SEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville 9, N. J. ADV. PG. 593.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

High Permeability Alloys

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Armo Steel Corp., 703 Curtis St., Middletown, Ohio.
 ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 180-186.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.
 DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
 THOMAS & SKINNER STEEL PRODUCTS CO., 122 E. 23rd St., Indianapolis, Ind. ADV. PG. 254.
 Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42, Mass.
 Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

Laminated Metal Parts

Allegheny Ludlum Steel Corp., HW Oliver Bldg., Pittsburgh 22, Pa.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goodyear Aircraft Corp., 1210 Massillon Road, Dept. 65, Akron 15, Ohio.
 Improved Seamless Wire Co., 775 Eddy St., Providence, R. I.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 THOMAS & SKINNER STEEL PRODUCTS CO., 1123 E. 23rd St., Indianapolis, Ind. ADV. PG. 254.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

Lead

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 FEDERATED METALS DIV., AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 National Lead Co., 111 Broadway, New York 6, N. Y.

Lithium Compounds (for cathode tube screen setting)

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Foote Mineral Co., 18 W. Chelton Ave., Philadelphia 44, Pa.

Magnesium

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Dow Chemical Co., Midland, Mich.
 FEDERATED METALS DIV., AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.
 Foote Mineral Co., 18 W. Chelton Ave., Philadelphia 44, Pa.

Magnetic Iron Oxide (for cores)

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Columbian Carbon Co., Mapico Color Div., 601 Cass St., Trenton, N. J.
 Magnetic Powders Inc., 1000 Fairview Ave., Johnsonburg, Pa.
 Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.
 WILLIAMS & CO., C. K., 640 N. 13th St., Easton, Pa. ADV. PG. 546.

Magnetic Powdered

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 GENERAL DYESTUFF CORP., 435 Hudson St., New York 14, N. Y. ADV. PG. 37.
 Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
 WILLIAMS & CO., C. K., 640 N. 13th St., Easton, Pa. ADV. PG. 546.

Magnetostriction

See Nickel and Nickel Alloys

Manganese

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Electro Metallurgical Co., A Div. of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Terry Mestre Ltd., 103 Park Ave., New York 17, N. Y.

Mercury

Baker Chemical Co., J. T., Phillipsburg, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Foote Mineral Co., 18 W. Chelton Ave., Philadelphia 44, Pa.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

Molybdenum

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 CROSS CO., H., 15 Beekman St., New York 38, N. Y. ADV. PG. 622.
 Electro Metallurgical Co., A Div. of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
 Murex, Ltd., Rainham, Essex, England.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Wilson Co., H. A., 2655 Hwy 22, Union, N. J.

Nickel and Nickel Alloys

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
 ALLOY METAL WIRE CO., 13th & Penna Ave., Prospect Park, Pa. ADV. PG. 526.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Armo Steel Corp., 703 Curtis St., Middletown, Ohio.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.
 DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 1, N. J. ADV. PG. 154.
 DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
 Haynes Stellite Co., A Div. of Union Carbide and Carbon Corp., Kokomo, Indiana.
 Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.
 International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 SEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville 9, N. J. ADV. PG. 593.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
 Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42, Mass.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 8, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

Nickel Ribbon

Alloy Metal Wire Co., 13th & Penna Ave., Prospect Park, Pa.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
 DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.

Palladium

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Metz Refining Co., 369 Mulberry St., Newark 2, N. J.
 NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

Phosphor Bronze

AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
 Plume & Atwood Mfg. Co., 220 Broadway, New York 17, N. Y.
 Reverse Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
 Riverside Metal Co., The, Riverside, N. J.

Platinum

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Baker Co., Inc., 113 Astor St., Newark 5, N. J.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., New Vernon, N. Y.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining, 111 N. Wabash Ave., Chicago 2, Ill.
 Handy & Harman, 82 Fulton St., New York 38, N. Y.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Metz Refining Co., 369 Mulberry St., Newark 2, N. J.
 NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
 SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 402.

Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

Polonium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
J. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 381.

Powdered

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
King Laboratories, Inc., 127 Solar St., Syracuse 4, N. Y.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.
United States Graphite Co., Div. of the Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

Radium

Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
J. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 381.

Titanium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Foote Mineral Co., 18 W. Cheltenham Ave., Philadelphia 44, Pa.

Zinc

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
Eastern Smelting & Refining Corp., 107-109 Brookline St., Boston 18, Mass.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
Hendy & Harman, 82 Fulton St., New York 38, N. Y.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
Kletz Refining Co., 369 Mulberry St., Newark 2, N. J.
LEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
SEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville 9, N. J. ADV. PG. 593.
Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

Silver Alloys and Compounds

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
Hendy & Harman, 82 Fulton St., New York 38, N. Y.
Mallinckrodt Chemical Works, Second and Mallinckrodt Sts., St. Louis 7, Mo.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
Kletz Refining Co., 369 Mulberry St., Newark 2, N. J.
LEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.

North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
Western Gold & Platinum Works, 589 Bryant St., San Francisco 2, Calif.
Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco, Calif.
Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

Steel

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
Lukens Steel Co. and Divisions, By-Products Steel Co. & Lukenweld, 447 Lukens Bldg., Coatesville, Pa.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
U. S. Steel Corp., 525 William Penn Place, Pittsburgh 30, Pa.
Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42, Mass.

Steel, Electric

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
Carpenter Steel Co., 142 W. Bern St., Reading, Pa.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
U. S. Steel Corp., 525 William Penn Place, Pittsburgh 30, Pa.

Steel, Stainless

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
ALLOY METAL WIRE CO., 13th and Pennsylvania Ave., Prospect Park, Pa. ADV. PG. 526.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.
DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 154.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
U. S. Steel Corp., 525 William Penn Place, Pittsburgh 30, Pa.
Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42, Mass.

Strontium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Foote Mineral Co., 18 W. Cheltenham Ave., Philadelphia 44, Pa.
King Laboratories Inc., 127 Solar St., Syracuse 4, N. Y.

Tantalum

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
CROSS CO., H., 15 Beekman St., New York 38, N. Y. ADV. PG. 622.
Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
Murex, Ltd., Rainham, Essex, England.

Thermostatic Bi-Metals

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Baker Co., Inc., 113 Astor St., Newark 5, N. J.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10 England.

Tin

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
FEDERATED METALS DIV., AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.

Titanium

Allegheny Ludlum Steel Corp., HW Oliver Bldg., Pittsburgh 22, Pa.
ALLOY METAL WIRE CO., 13th & Penna Ave., Prospect Park, Pa. ADV. PG. 526.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
Foote Mineral Co., 18 W. Cheltenham Ave., Philadelphia 44, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Metal Hydrides, Inc., Beverly, Mass.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.

Tungsten

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
Murex, Ltd., Rainham, Essex, England.
North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
Terry Mestre Ltd., 103 Park Ave., New York 17, N. Y.
Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

Tungsten Ribbon

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
CROSS CO., H., 15 Beekman St., New York 38, N. Y. ADV. PG. 622.
Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Uranium

Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.
Terry Mestre Ltd., 103 Park Ave., New York 17, N. Y.

Zinc

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
FEDERATED METALS DIV., AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.
Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
New Jersey Zinc Co., 160 Front St., New York 7, N. Y.
SEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville, N. J. ADV. PG. 593.

Zirconium

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Foote Mineral Co., 18 W. Cheltenham Ave., Philadelphia 44, Pa.
Metal Hydrides, Inc., Beverly, Mass.
Murex, Ltd., Rainham, Essex, England.

METEOROLOGICAL EQUIPMENT—Electronic

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
Hastings Instrument Co., Inc., Hampton 9, Va.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
Muirhead & Co., Ltd., Beckenham, Kent, England.
Northeastern Engineering, Inc., Manchester, N. H.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

METERS, Acceleration

See Accelerometers

METERS—Attenuation

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.

ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
 Network Mfg. Co., 213 W. Fifth St., Bayonne, N. J.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.

METERS—Cable Testing

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
 Sierra Electronic Corp., San Carlos, Calif.
 STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

METERS—Counting Rate

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 621.
 Airtec Ltd., High Wycombe, Buckinghamshire, England.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.
 Bristol Co., The, Waterbury 20, Conn.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
 Nucleonic Corp. of America, The, 497 Union St., Brooklyn 31, N. Y.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Tracerlab Inc., 130 High St., Boston 10, Mass.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.
 Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

METERS—d'Arsonval

See Also Galvanometers

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 Burlington Instrument Co., Burlington, Iowa.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Electric Design & Mfg. Corp., Burlington, Iowa.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 592.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.
 Supreme, Inc., Box E-552, Greenwood, Miss.
 Taco West Corp., 525 N. Noble St., Chicago 22, Ill.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

METERS—Decibel

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 Burlington Instrument Co., Burlington, Iowa.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 Electric Design & Mfg. Co., Burlington, Iowa.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

METERS—Distortion and Noise

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside 61, N. Y. ADV. PG. 395.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 130.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

METERS—Elapsed Time

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mount Vernon, N. Y. ADV. PG. 546.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.
 Bristol Co., The, Waterbury 20, Conn.
 Burlington Instrument Co., Burlington, Iowa.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
 DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 30, Ill. ADV. PG. 609.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Foxboro Co., The, Foxboro, Mass.
 HAYDON CO., A. W., 232 N. Elm St., Waterbury 20, Conn. ADV. PG. 477.
 HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 208, 209.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Industrial Timer Corp., 115 Edison Place, Newark 1, N. J.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., Hartford 8, Conn. ADV. PG. 449.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
 Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford 13, Conn.
 Streeter-Ames Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 Yellow Springs Instrument Co., Inc., P. O. Box 10, Yellow Springs, Ohio.

METERS—Electronic Capacitance**METERS—Field Strength**

See Instruments—Electrical Measuring

METERS—Flow, Electronic

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bristol Co., The, Waterbury 20, Conn.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hastings Instrument Co., Hampton 9, Va.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 24, Pa. ADV. PG. 354, 355.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

METERS—Flutter

See Meters, Wow and Flutter

METERS—F-M Deviation

See Instruments—Electrical Measuring

METERS—Footcandle

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

METERS—Frequency

See Instruments—Electrical Measuring

METERS—Frequency, Microwave

See Microwave Accessories

METERS—Grid Dip

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Elrico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

MEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Misco Mfg. Co., 82 Herman St., East Rutherford, N. J.
 MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 130.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 New London Instrument Co., P. O. Box 189, New London, Conn.
 Oregon Electronic Mfg. Co., 2232 E. Burnside St., Portland 15, Ore.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co. Div., American Gage & Machine Co., 5218 Kinzie St., Chicago 44, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

METERS—Impedance

See Instruments—Electrical Measuring

METERS—Light

Federal Instrument Corp., 14-02 Broadway, Long Island City 6, N. Y.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

METERS—Phase Angle

See Instruments—Electrical Measuring

METERS—Photoelectric Reflection

Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

METERS—Power Factor

METERS—Q

METERS—RF Power

See Instruments—Electrical Measuring

METERS—Power Output

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Bristol Co., The, Waterbury 20, Conn.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 FLUKE ENGINEERING CO., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 578.
 FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Weston Laboratories, Inc., Harvard, Mass.

METERS—Vibration

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 CALIDYNE CO., THE, P. O. Box 72, Winchester, Mass. ADV. PG. 463.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Erwood, Inc., 1770 Berteau Ave., Chicago 13, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Gulton Mfg. Corp., Metuchen, N. J.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 474.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Vibroscope Co., 6 E. 39th St., New York 16, N. Y.

METERS—Microwave

See MICROWAVE ACCESSORIES

METERS—Modulation

See Instruments—Electrical Measuring

METERS—Moisture, Electronic

BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Canadian Aviation Electronics, Ltd., 8280 St. Lawrence Blvd., Montreal 14, P. Q., Canada.
 Delmhorst Instrument Co., 601 Cedar St., Boonton, N. J.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Fielden Instrument Div., Robert-Shaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hart Moisture Gauges, Inc., 126 Liberty St., New York 6, N. Y.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Midcon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

METERS—Sound Level

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Erwood, Inc., 1770 Berteau Ave., Chicago 13, Ill.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 Gates Radio Co., Quincy, Ill.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Scott, Inc., Hermon Hosmer, 395 Putnam Ave., Cambridge 39, Mass.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Electronics Corp., 239 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

METERS—Viscosity, Electronic

Bendix Aviation Corp., 203 W. Third St., Cincinnati 2, Ohio.
 Foxboro Co., The, Foxboro, Mass.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

METERS—Wave

See Instruments—Electrical Measuring

METERS—Wow and Flutter

Furst Electronics, 3322 W. Lawrence Ave., Chicago 25, Ill.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.

METERS—X-Ray Intensity

See Instruments—Electrical Measuring

MICA

See Insulation Materials

MICROAMMETERS

MICROFARADMETERS

See Instruments—Electrical Measuring

MICROMETERS—Electronic

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Dice Co., J. W., Englewood, N. J.
 FREQUENCY STANDARDS, Box 504, Asbury Park, N. J. ADV. PG. 102.
 Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.

MICRO-MICROAMMETERS

See Instruments—Electrical Measuring

MICROPHONES—Aircraft Type

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Electro-Voice, Inc., Buchanan, Mich.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back and Back Covers.
 ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 228, 302.

METERS—Null

METERS—Output

METERS—Panel

See Instruments—Electrical Measuring

METERS—pH Meters, Recorders & Comparators

Analytical Measurements, Inc., 585 Main St., Chatham, N. J.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.
 Foxboro Co., The, Foxboro, Mass.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Menlo Research Laboratory, Menlo Park, Calif.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.

METERS—Standing Wave Ratio

See Instruments—Electrical Measuring

METERS—Thermocouple

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Bristol Co., The, Waterbury 20, Conn.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Foxboro Co., The, Foxboro, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 592.

Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
Sears Co., M. J., Delaware County, Roxbury, N. Y.
Telephonics Corp., Park Ave., Huntington, N. Y.
TURNER CO., THE, 909 17th St., N.E., Cedar Rapids, Iowa. ADV. PG. 312.
Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

MICROPHONES—Carbon

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
Astatic Corporation, The, Conneaut, Ohio.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
Electro-Voice, Inc., Buchanan, Mich.
Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 228, 302.
Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
Sears Co., M. J., Delaware County, Roxbury, N. Y.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, Ill. ADV. PG. 210.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stromberg-Carlson Co., Rochester 3, N. Y.
Telephonics Corp., Park Ave., Huntington, N. Y.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 312.
Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.
UNIVERSITY LOUDSPEAKERS INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

MICROPHONES—Condenser

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
Capps & Co., Inc., Frank L., 244 W. 49th St., New York 19, N. Y.
International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
Stromberg-Carlson Co., Rochester 3, N. Y.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

MICROPHONES—Contact

AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 258.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
Electro-Voice, Inc., Buchanan, Mich.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 312.

MICROPHONES—Crystal

American Microphone Co., 370 So. Fair Oaks Ave., Pasadena 1, Calif.
Astatic Corporation, The, Conneaut, Ohio.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
Dyna Labs, Inc., 1075 Stewart Ave., Garden City, N. Y. Electro, Inc., Delaware, Ohio.
Electro-Voice, Inc., Buchanan, Mich.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
Gulton Mfg. Corp., Metuchen, N. J.
Lesla, Via Bergamo 21, Milan, Italy.

Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, Ill. ADV. PG. 210.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Stromberg-Carlson Co., Rochester 3, N. Y.
Tibbetts Industries, Inc., Camden, Maine.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 312.
Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.

MICROPHONES—Dynamic

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
American Microphone Co., 370 So. Fair Oaks Ave., Pasadena 1, Calif.
AMPERITE CO., 561 Broadway, New York 12, N. Y. ADV. PG. 258.
Astatic Corporation, The, Conneaut, Ohio.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
Electro-Voice, Inc., Buchanan, Mich.
Lesla, Via Bergamo 21, Milan, Italy.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Sears Co., M. J., Delaware County, Roxbury, N. Y.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, Ill. ADV. PG. 210.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stromberg-Carlson Co., Rochester 3, N. Y.
Telephonics Corp., Park Ave., Huntington, N. Y.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 312.
Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.
Wright-Zimmerman, Inc., New Brighton, Minn.

MICROPHONES—Magnetic

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden Conn. ADV. PG. 590.
Dyna Labs, Inc., 1075 Stewart Ave., Garden City, N. Y.
Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, Ill.
Lesla, Via Bergamo 21, Milan, Italy.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, Ill. ADV. PG. 210.
Stromberg-Carlson Co., Rochester 3, N. Y.
Telephonics Corp., Park Ave., Huntington, N. Y.
Telex, Inc., Telex Park, St. Paul 1, Minn.

MICROPHONES—Noise Cancelling

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
Electro-Voice, Inc., Buchanan, Mich.
Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, Ill.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 228, 302.
Sears Co., M. J., Delaware County, Roxbury, N. Y.
Telephonics Corp., Park Ave., Huntington, N. Y.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 312.

MICROPHONES—Velocity

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
AMPERITE CO., 561 Broadway, New York 12, N. Y. ADV. PG. 258.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Electro-Voice, Inc., Buchanan, Mich.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, Ill. ADV. PG. 210.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 312.
Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.

MICROSCOPES—Electron

Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

MICROWAVE ACCESSORIES**Amplifiers, Microwave to Waveguides inclusive****AMPLIFIERS—Microwave**

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
BROWNING LABORATORIES, INC., 750 Main St., Waltham, Mass. ADV. PG. 444.
Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.
Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Third Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
MAXSON CORP., W. L., 460 W. 34th St., New York 34, N. Y. ADV. PG. 144.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
SPERRY GYROSCOPE CO. DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 283, 284.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Transitron, Inc., 154 Spring St., New York 12, N. Y.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 392, 393.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

AMPLIFIERS—Microwave Radar

American Electroneering Co., 2040 Colorado Ave., Santa Monica, Calif.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Port St., Bristol 1, Pa. ADV. PG. 547.
DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
MAGNAVOX CO., The Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
MAXSON CORP., W. L., 460 W. 34th St., New York 34, N. Y. ADV. PG. 144.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO. DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 283, 284.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Transitron, Inc., 154 Spring St., New York 12, N. Y.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 392, 393.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

ANALYZERS—Microwave Radar

C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.

CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass.

ANTENNAS—Microwave

Ainslie Electronic Products, Inc., 312 Quincy Ave., Quincy 69, Mass.
 ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
 BART LABS. CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 593.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 DALMO VICTOR CO., 1414 El Camino Real, San Carlos, Calif. ADV. PG. 191.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 DORNE AND MARGOLIN, 30 Sylvester St., Westbury, N. Y. ADV. PG. 569.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
 FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
 Kennedy & Co., D. S., Cohasset, Mass.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
 MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
 MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Network Mfg. Co., 213 W. Fifth St., Bayonne, N. J.
 PRODELIN, INC., 307 Bergen Ave., Kearny, N. J. ADV. PG. 306.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Stainless, Inc., Third St., North Wales, Pa.
 Terpening Co., L. H., 16 W. 61st St., New York 23, N. Y.
 TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
 Torgren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.
 WORKSHOP ASSOCIATES, DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 286.

ATTENUATORS—Microwave

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y.
 EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Luhrs & Co., C. H., 297 Hudson St., Hackensack, N. J.
 Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
 MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhurst, N. Y.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Telewave Laboratories, Inc., 100 Metropolitan Ave., Brooklyn 11, N. Y.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weinschel Engineering Co., Inc., 10511 Metropolitan Ave., Kensington, Md.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ATTENUATORS—Microwave, Adjusted & Calibrated

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, Conn.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 108, 109.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Radiation, Inc., Melbourne, Fla.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ATTENUATORS—Microwave Coaxial Fixed

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y.
 EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Luhrs & Co., C. H., 297 Hudson St., Hackensack, N. J.
 Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
 MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhurst, N. Y.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Telewave Laboratories, Inc., 100 Metropolitan Ave., Brooklyn 11, N. Y.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weinschel Engineering Co., Inc., 10511 Metropolitan Ave., Kensington, Md.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ATTENUATORS—Microwave Step

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhurst, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Terpening Co., L. H., 16 W. 61st St., New York 23, N. Y.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weinschel Engineering Co., Inc., 10511 Metropolitan Ave., Kensington, Md.

BENDS—Microwave

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 BART LABS. CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 593.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Kent Co., F. C., 64 Howard St., Irvington, N. J.
 MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

CAVITIES—Microwave

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.

COUPLERS—Directional

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Graham Mfg. Co., Inc., 47 Brodgate St., East Greenwich, Conn.
 JONES ELECTRONICS CO., M. C., 96 N. Main St., Bristol, Conn. ADV. PG. 440.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
 Roftan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Sierra Electronics Corp., San Carlos, Calif.
 SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
 TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

COUPLINGS—Microwave

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Graham Mfg. Co., Inc., 47 Brodige St., East Greenwich, Conn.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto. ADV. PG. 29-34.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

FILTERS—Microwave

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 296.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

FLANGES—Microwave

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.

Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Pfleger Products, 3901 W. 54th St., Los Angeles, Calif.
 Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 392, 393.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

HORNS—Microwave

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 Kent Co., F. C., 64 Howard St., Irvington, N. J.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
PRODELIN, INC., 307 Bergen Ave., Kearny, N. J. ADV. PG. 306.
 Racon Electric Co., 52 E. 19th St., New York 3 N. Y.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Thompson Products, Inc., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

HYBRID JUNCTIONS—Microwave

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
TITEFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

JOINTS—Rotary—Microwave

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Vernon, N. Y. ADV. PG. 260.
DALMO VICTOR CO., 1414 El Camino Real, San Carlos, Calif. ADV. PG. 191.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

MARKERS—Frequency, Microwave

MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

METERS—Frequency, Microwave

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
FEDERAL MFG. & ENGINEERING CORP., 211 Steubenville St., Brooklyn 5, N. Y. ADV. PG. 415.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
GENERAL COMMUNICATIONS CO., 681 Beacon St., Boston 15, Mass. ADV. PG. 311.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Radiation, Inc., Melbourne, Fla.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

METERS—Microwave

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

MICROWAVE TRANSMISSION LINES

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
BART LABS. CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 593.
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
COAXIAL CONNECTOR CO., 35 North Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Communication Products Co., Inc., Marlboro, N. J.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
PRODELIN, INC., 307 Bergen Ave., Kearney, N. J. ADV. PG. 306.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhurst, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
WORKSHOP ASSOCIATES DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 286.

ROBES—Microwave

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Intel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
IMITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
COAXIAL CONNECTOR CO., 35 North Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Philco Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

OSCILLATORS—Microwave Power

Beam Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 Scimeter, Inc., 1430 Market St., Denver 2, Colo.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Hetherington, Inc., 8026 Monticello Ave., Skokie, Ill.
WELT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Wiggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.

MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 108, 109.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 392, 393.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

RECEIVERS—Microwave

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 Northeastern Engineering Inc., Manchester, N. H.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Video Corp. of America, 229 W. 28th St., New York 1, N. Y.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

STANDARDS—Frequency, Microwave

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 36, N. Y. ADV. PG. 505.
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

SWITCHES—Microwave

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Cunningham Son & Co., Inc., James, 13 Canal St., Rochester, N. Y.
DALMO VICTOR CO., 1414 El Camino Real, San Carlos, Calif. ADV. PG. 191.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
 Hetherington, Inc., Sharon Hill, Pa.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Thompson Products, Inc., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

TERMINATIONS—Microwave

Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Tru-Connector Corp., 416 Union St., Lynn, Mass.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

TESTERS—Microwave Testing Equipment

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Manson Laboratories, 207 Greenwich Ave., Stamford, Conn.
MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 110.
 Missouri Research Labs., 2109 Locust St., St. Louis 3, Mo.
 Northeastern Engineering Inc., Manchester, N. H.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., Div. of Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.

TRANSFORMERS—Microwave
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTRAL TRANSFORMER CO., 910 W. Jackson Ave., Chicago, Ill. ADV. PG. 577. (h)

DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18. (h)
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 K-V Transformer Corp., Danbury, Conn.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.
TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 546. (h)
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346.

TRANSMITTERS—Microwave

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
MAXSON CORP., W. L., 460 W. 34th St., New York 34, N. Y. ADV. PG. 144.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Electronics Corp., 289 Emert St., Newark 5, N. J.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

TUBES—Microwave Receiving or Transmitting

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 230, 231.
EITEL McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.
 Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass.
 Lewis & Kaufman, Ltd., P. O. Box 337, 90 El Rancho Ave., Los Gatos, Calif.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
RAYTHEON MFG. CO., POWER TUBE DIV., Waltham 54, Mass. ADV. PG. 421.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Red Bank, N. J. ADV. PG. 134.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUNERS—Microwave

Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
COAXIAL CONNECTOR CO., 35 North Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 335 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Dunn Engineering Associates, Inc., 11 Windsor St., Cambridge 39, Mass.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

WAVEGUIDES

C—Combination Rigid & Flexible Type
F—Flexible Type
R—Rigid Type

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534. C-F-R
 Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif. R
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. R
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J. R
BART LABORATORIES, CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 593. R
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y. C-R
 Bone Engineering Co., 701 W. Broadway, Glendale 4, Calif. R
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y. C-R
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573. C-R
COAXIAL CONNECTOR CO., 35 North Second Ave., Mt. Vernon, N. Y. ADV. PG. 260. R
DALMO VICTOR CO., 1414 El Camino Real, San Carlos, Calif. ADV. PG. 191. R
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. R
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass. R
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559. C-R
 Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y. R
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256. R
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, Conn. R
 Industrial Products Co., Danbury, Conn. R
 Kent Co., F. C., 64 Howard St., Irvington, N. J. R

KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245. C-F
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
N. R. K. MFG. & ENGINEERING CO., 4601 W. Addison St., Chicago 41, Ill. ADV. PG. 443
 Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
PRODELIN, INC., 207 Bergen Ave., Kearny, N. J. ADV. PG. 306.
 Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindhurst, N. Y.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Sighthmaster of California Co., Gillespie Airport, Santa Ana, Calif. C-F
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn. C-F
TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427. C-F
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 White Industries, Inc., 421 W. 54th St., New York 1, N. Y.
WORKSHOP ASSOCIATES DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 286.

MICROWAVE TRANSMISSION LINES

See Microwave Accessories

MILLIAMMETERS

See Instruments—Electrical Measuring

MILLIOHMETERS

Cole Instrument Co., 1320 S. Grand Ave., Dept. Los Angeles 15, Calif.
 Columbus Products Corp., 1010 Saw Mill River Pkwy., Yonkers, N. Y.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 29, New Haven 15, Conn. ADV. PG. 563.
 Metropolitan Electronics & Instruments Co., 106 Franklin Ave., New York 11, N. Y.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Mt. Vernon, N. Y. ADV. PG. 617.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Southwestern Industrial Electronics Co., 2831 Post Rd., P. O. Box 13058, Houston 19, Texas.
STITCH CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.
 Supreme, Inc., Box E-552, Greenwood, Miss.
 Triplett Electrical Instrument Co., Harmon Road, Brighton, Ohio.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 89, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

MILLIVOLTMETERS

See Instruments—Electrical Measuring

MIRRORS—Special Purpose

Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
 American Optical Co., Box A, Buffalo 15, N. Y.
 Bennett Mfg. Co., Alden, N. Y.
BREW & CO., INC., RICHARD D., 106 Concord Ave., Belmont 78, Mass. ADV. PG. 544.
 Buhl Optical Co., 1009 Beech Ave., Pittsburgh 4, Pa.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Liberty Mirror Div., Libbey-Owens-Ford Glass Co., Braintree, Pa.
 Pacific Universal Products Corp., 168 Vista Ave., Pasadena 8, Calif.
 Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
 Polan Industries, Huntington 19, W. Va.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
 Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

MIRRORS—Television

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
 Bache & Co., Semon, 636 Greenwich St., New York 1, N. Y.
 Buhl Optical Co., 1009 Beech Ave., Pittsburgh 4, Pa.

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
RAY RESEARCH & DEVELOPMENT CO., INC., 658 Hilliard St., Manchester, Conn. ADV. PG. 469.
 Liberty Mirror Div., Libbey-Owens-Ford Glass Co., Brack-
 enridge, Pa.
 Pacific Universal Products Corp., 168 Vista Ave., Pasadena 8, Calif.
 Sincro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
 Sloan Industries, Huntington 19, W. Va.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

MIXERS—Portable

See Amplifiers, Audio Frequency

MODULATORS—Magnetic

MARKE & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y.—ADV. PG. 437.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
M.G. Electric Corp., 31 W. 27th St., New York 1, N. Y.

MOISTURE

See Indicators

MONITORS—AM-FM Transmitter

Atas Radio Co., Quincy, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
NIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 550.
ARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Arconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

MONITORS—Frequency

Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BURKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Gema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
 Res Radio Co., Quincy, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
NIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 550.
 Ampkin Laboratories, Inc., Bradenton 1, Fla.
ARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 196-198.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
WALKERT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

MONITORS—Modulation

DOWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 444.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
 Res Radio Co., Quincy, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Ampkin Laboratories, Inc., Bradenton 1, Fla.
ARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Monitor Products Co., 815 Fremont Ave., So. Pasadena, Calif.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

MONITORS—Television, Transmitter

Arac, Ltd., Glendora, Calif.

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 108, 109.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Television Utilities Corp., 1315 Jericho Turnpike, New Hyde Park, N. Y.

MOTOR CONTROLS

See Controls

MOTORS

1. Fractional HP
2. Gear
3. Phonograph
4. Remote Control
5. Servo
6. Synchronous
7. Timing

AIR ASSOCIATES, INC., Teterboro, N. J. 1-4-5. ADV. PG. 329.
 Airborne Accessories, Inc., 25 Montgomery St., Hillside 5, N. J. 5.
 Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio 1-3.
AIR-MARINE MOTORS, INC., 3939 Merrick Rd., Seaford, N. Y. 1-4-5-6. ADV. PG. 589.
 Allegheny Ludlum Steel Corp., H W Oliver Bldg., Pittsburgh 22, Pa. 7.
 American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif. 1-5-6.
 Anglo Corp., 2037 W. Division St., Chicago 22, Ill. 1-6-7.
 Arma Corp., 254 36th St., Brooklyn 32, N. Y. 1-4-5.
 Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill. 4-5.
 Atlas Coil Winders, Inc., 39 Manhattan St., Stamford, Conn. 1-5-6.
 Barber-Colman Co., Rockford, Ill. 1.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif. 1-7.
 Birmingham Sound Reproducers, Ltd., Claremont Works, Old Hill, Staffs, England. 3.
 Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, Ill. 1-4-5-6-7.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 6.
 Bristol Co., The, Waterbury 20, Conn. 7.
BRISTOL MOTOR DIVISION, Vocoline Company of America, Inc., Old Saybrook, Conn. 6-7. ADV. PG. 279.
 Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif. 1-3.
 Century Electric Co., 1806 Pine St., St. Louis 3, Mo. 1-6.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Brittainia St., Meriden, Conn. 1. ADV. PG. 590.
CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. 6. ADV. PG. 569.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. 7. ADV. PG. 143.
 Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester, N. Y. 1.
 Diehl Mfg. Co., 1129 Funderne Ave., Somerville, N. J. 1-4-5.
 Dumore Co., The, 1300 17th St., Racine, Wis. 1.
 Eastern Air Devices, Inc., 583 Dean St., Brooklyn 17, N. Y. 1-6.
ECLIPSE PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. 5. ADV. PG. 132, 133.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. 1. ADV. PG. 120.
ELECTRIC INDICATOR CO., Camp Ave., Springdale, Conn. 1-5-6. ADV. PG. 551.
 Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn. 6.
 Electric Specialty Co., 300 South St., Stamford, Conn. 1.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn. 1.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. 1-3-4-6. ADV. PG. 592.
 Electylme Motor Products Corp., Genoa, Ill. 7.
 Fasco Industries, Inc., Rochester 2, N. Y. 1.
 Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill. 2.
FORD INSTRUMENT DIV., The Sperry Corp., 31-10 Thomson Ave., Long Island City, N. Y. 5. ADV. PG. 582.

G-M LABORATORIES, 4336 N. Knox Ave., Chicago, Ill. 5. ADV. PG. 497.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y. 1-6-7.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-3-4-5-6-7. ADV. PG. 1-18.
 General Industries Co., Taylor & Olive Sts., Elyria, Ohio. 1-3-4.
 Gleason-Avery Co., Auburn, N. Y. 1-3-6.
 Globe Industries, 125 Sunrise Place, Dayton 7, Ohio. 1-5.
 Hagen Mfg. Co., Inc., Baraboo, Wis. 6-7.
 Hansen Mfg. Co., Inc., Princeton, Ind. 5-6-7.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y. 3.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. 6-7. ADV. PG. 477.
HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. 6-7. ADV. PG. 208, 209.
HEINZE ELECTRIC CORP., 685 Lawrence St., Lowell, Mass. 1. ADV. PG. 326.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio. 1-5-6.
 Holtzer-Cabot, Div. of National Pneumatic Co., Inc., 125 Amory St., Boston 19, Mass. 1-5-6.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. 1-3-5-6. ADV. PG. 298.
 Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y. 1-3-4-5-6-7.
 Ingraham Co., E., Bristol, Conn. 6.
 Jack & Heintz, Inc., Cleveland 1, Ohio. 1.
 Jaen Electromotive Corp., 10-02 44th Drive, Long Island City, N. Y. 1.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. 1-5-6. ADV. PG. 411.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. 4-5. ADV. PG. 159.
 Kinetix Instrument Co., Inc., #02 Broadway, New York 10, N. Y. 5.
 Kollsman Instrument Corp., 80-08 45 Ave., Elmhurst, N. Y. 4-5-6.
 Leland Electric Co., The, Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio. 1.
 Lesa, Via Bergamo 21, Milan, Italy. 1-3-6.
 Marathon Electric Mfg. Corp., Randolph & Cherry Sts., Wasau, Wis. 1.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis. 1-3.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. 5. ADV. PG. 144.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. 5-6. ADV. PG. 354, 355.
MISSION-WESTERN ENGINEERS, INC., 132-134 W. Colorado St., Pasadena 1, Calif. 1-4-5-6-7. ADV. PG. 574.
 Motoresearch Co., 1600 Junction, Racine, Wis. 7.
 Muirhead & Co., Ltd., Beckenham, Kent, England. 4-5.
OSTER MFG. CO., JOHN, 1 Main St., Racine, Wis. 1-4-5. ADV. PG. 494.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill. 1.
 Piqua Machine & Mfg. Co., Young & College Sts., Piqua, Ohio. 1.
 Rae Motor Corp., Box 291, Racine, Wis. 1.
RED BANK DIVISION, Bendix Aviation Corp., Eatontown, N. J. 1-7. ADV. PG. 134.
 Redmond Co., Inc., Elm St., Owosso, Mich. 1.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill. 1-6.
 Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio. 1-6.
ROTRON MFG. CO., INC., 7-9 Schoonmaker Lane, Woodstock, N. Y. 1. ADV. PG. 136.
 Rust Industrial Co., 608 Willow St., Manchester, N. H. 4.
 Scovill Manufacturing Co., Waterbury 20, Conn. 1.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. 5-6. ADV. PG. 426.
 Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J. 1-4-5.
SESSIONS CLOCK CO., Forestville, Conn. 6-7. ADV. PG. 459.
 Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill. 1-5-6.
SPECIALTY BATTERY CO., Madison 4, Wis. 1. ADV. PG. 490.
 Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill. 1-2.
 Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif. 1-6.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. 1-5.
TELECHRON DEPT. OF GENERAL ELECTRIC CO., Ashland, Mass. 6-7. ADV. PG. 19.
 Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. 1.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. 6. ADV. PG. 384.
TRANSICOIL CORP., 107 Grand St., New York 13, N. Y. 5. ADV. PG. 461.
 Universal Electric Co., 300 E. Main St., Owosso, Mich. 1.
 Wagner Electric Corp., 6400 Plymouth Ave., St. Louis 14, Mo. 1.
 White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo. 4-5.
 Wincharger Corp., E. Seventh & Division Sts., Sioux City, Iowa. 1.

MOUNTINGS

See also Bases

MOUNTINGS—Meter Back

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 LITTELFUSE, INC., Des Plaines, Ill. ADV. PG. 482.
 LORD MFG. CO., 1635 W. 12th St., Erie, Pa. ADV. PG. 78.
 RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.

MOUNTINGS—Vibration and Shock

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 BARRY CORP., THE, 711 Pleasant St., Watertown 72, Mass. ADV. PG. 71.
 Federal Shock Mount Corp., 1077 Intervale Ave., New York 59, N. Y.
 FINN & COMPANY, INC., T. R., 333 Jackson Avenue, New York 54, N. Y. ADV. PG. 623.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Tire & Rubber Co., The, Akron, Ohio.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 LORD MFG. CO., 1635 W. 12th St., Erie, Pa. ADV. PG. 78.
 M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 474.
 METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 464.
 Minnesota Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
 ROBINSON AVIATION INC., Teterboro Air Terminal, Teterboro, N. J. ADV. PG. 307.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Taylor Fibre Co., Norristown, Pa.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
 UCINITE CO., Div. of United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.
 UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 399.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

MOUNTS—Antenna

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 Baker Manufacturing Co., Evansville, Wis.
 Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
 Channel Master Co., Ellenville, N. Y.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. 258, 623.
 Kenwood Engineering Co., Inc., 265 Colfax Ave., Kenilworth, N. J.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 LORD MFG. CO., 1635 W. 12th St., Erie, Pa. ADV. PG. 78.
 M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 474.
 Modern-Aire Mfg. Co., 4436 W. Roosevelt Rd., Chicago 24, Ill.
 Penn Television Products Co., Allegheny & Trenton Ave., Philadelphia 34, Pa.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
 Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls, N. Y.
 Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Rohn Mfg. Co., 116 Limestone, Bellevue, Peoria, Ill.
 South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
 TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 326.
 Tempo T-V Products Co., 2450 Ramona Blvd., Los Angeles 33, Calif.
 Tele-Ex-Pand Products Sales Corp., P. O. Box 392, Berwick, Pa.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
 Walnut Machine Co., 1529 S. Walnut St., South Bend 14, Ind.

MOUNTS—Thermistor

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

MULTIPLIERS—Crystal

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.

MULTIPLIERS—Frequency

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Microlab, 301 S. Ridgewood Rd., South Orange, N. J.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

MULTIPLIERS—Meter

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Burlington Instrument Co., Burlington, Iowa.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 EASTERN PRECISION RESISTOR CORP., 130-11 90 Ave., Richmond Hill 18, N. Y. ADV. PG. 560.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. ADV. PG. 424, 425.
 INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 PRECISION RESISTOR CO., 334 Badger Ave., Newark 8, N. J. ADV. PG. 330.
 RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

MULTITESTERS

See Testers—Multitesters

MULTIVIBRATORS

See Vibrators—Multivibrators

MUSIC SYSTEMS—Industrial and Commercial

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bell Sound Systems, Inc., 555 Marlon Rd., Columbus 7, Ohio.

Bogen Co., Inc., David 29 Ninth Ave., New York N. Y.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Executone, Inc., 415 Lexington Ave., New York N. Y.
 Gates Radio Co., Quincy, Ill.
 Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 7, Calif.
 Magna Electronics Co., 9810 Arza Ave., P. O. Box Inglewood, Calif.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Newcomb Audio Products Co., 6824 Lexington Hollywood 38, Calif.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside & Back Cover.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 11, Ill.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 Western Sound & Electric Labs., Inc., 805 S. Fifth Milwaukee 4, Wis.

NAILS—Special

Aluminum Co. of America, Alcoa Bldg., Pittsburgh, Pa.
 American Steel & Wire Div., U. S. Steel Co., Rocket Bldg., Cleveland 13, Ohio.
 Autoscrew Co., 216-222 West 18th St., New York, N. Y.
 Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Hassall, Inc., John, Clay & Oakland Sts., Brooklyn, N. Y.
 Screw Corp. of America, 103 Park Ave., New York N. Y.

NAME PLATES

See Plates, Name—Metal or Plastic

NEEDLES—Cutting

American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y.
 AUDIO DEVICES, INC., 444 Madison Ave., New York N. Y. ADV. PG. 347.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
 Capps & Co., Inc., Frank L., 244 W. 49th St., New York 19, N. Y.
 Duotone Co., Inc., Keyport, N. J.
 Electrovox Co., Inc., 60 Franklin St., East Orange, N. J.
 Fairchild Recording Equipment Co., 154th St. & Sewall Ave., Whitestone, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Jensen Industries, Inc., 329 S. Wood St., Chicago, Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago 11, Ill.
 Permo, Inc., 6415 Ravenswood Ave., Chicago 26, Ill.
 Recordisc Corp., 395 Broadway, New York, N. Y.
 Recoton Corp., 147 W. 22nd St., New York 11, N. Y.

NEEDLES—Playback

American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y.
 AUDIO DEVICES, INC., 444 Madison Ave., New York 19, N. Y. ADV. PG. 347.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
 Capps & Co., Inc., Frank L., 244 W. 49th St., New York 19, N. Y.
 Duotone Co., Inc., Keyport, N. J.
 Electrovox Co., Inc., 60 Franklin St., East Orange, N. J.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Gerrett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
 J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Jensen Industries Inc., 329 S. Wood St., Chicago, Ill.
 Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago 11, Ill.
 Pacific Transducer Corp., 11921 S.W. Pico Blvd., Los Angeles 64, Calif.
 Permo, Inc., 6415 Ravenswood Ave., Chicago 26, Ill.
 Pfanstiehl Chemical Co., 104 Lake View Ave., Waukegan, Ill.
 Recordisc Corp., 395 Broadway, New York, N. Y.
 Recoton Corp., 147 W. 22nd St., New York 11, N. Y.
 Sonotone Corp., P. O. Box 200, Saw Mill River Elmsford, N. Y.
 Tetrad Corp., 62 St. Mary St., Yonkers, N. Y.
 Vallorbs Jewel Co., Lancaster, Pa.

NETWORKS—Directional Antenna Phasing

ANDREW CORP., 363 E. 75th St., Chicago 19, ADV. PG. 556.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Logart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
States Radio Co., Quincy, Ill.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

NETWORKS—Matching

Intec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
Radio of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
WREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
States Radio Co., Quincy, Ill.
Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
HALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
Thorndarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

NETWORKS—Pulse Forming

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Hubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
LEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
Tele Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Person Electric Mfg. Corp., 540 39th St., Union City, N. J.
Electronic Systems Co., 578 E. 161st St., New York 56, N. Y.
Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
Ycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
Allen Mfg. Co., James, 150 Exchange St., Malden, Mass.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
C A ELECTRONICS INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
Elastic Capacitors, Inc., 2511 W. Moffat St., Chicago 47, Ill.
Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
Prague Electric Co., 125 Marshall St., North Adams, Mass.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
ELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
Thorndarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

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See Detectors

NUTS

ALLEN MFG. CO., Hartford 2, Conn. ADV. PG. 384.
Almetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.

Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.
Atlas Screw & Specialty Co., 450 Broome St., New York 13, N. Y.
Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
Central Screw Co., 3501 Shields Ave., Chicago 9, Ill.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
Continental Screw Co., New Bedford, Mass.
Dial Screw Products Co., Inc., 32-21 58th St., Woodside, N. Y.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.
Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Jacobson Mfg. Co., Inc., Kenilworth 2, N. J.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 522.
National Screw & Mfg. Co., The, Cleveland 4, Ohio.
Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Progressive Mfg. Co., Torrington, Conn.
Russell, Burdshall & Ward Bolt & Nut Co., Port Chester, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Shakeproof, Div. of Illinois Tool Works, 2501 N. Keeler Ave., Chicago 39, Ill.
Smith, Inc., Herman, H., 436 18th St., Brooklyn 15, N. Y.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
Standard Locknut & Lockwasher, Inc., 501 N. Capitol Ave., Indianapolis 4, Ind.
Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.
TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio, ADV. PG. 155.
United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.
Waltham Screw Co., 77 Rumford Ave., Waltham, Mass.
Westfield Metal Products Co., Inc., Elm & Burton Sts., Westfield, Mass.

NUTS—Self-Locking

Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
Boots Aircraft Nut Corp., 55 John St., Stamford, Conn.
ELASTIC STOP NUT CORP., 2330 Vauxhall Road, Union, N. J. ADV. PG. 335.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 522.
KLINGER LOCKNUT CORP., 2153 Hillside Ave., Indianapolis, Ind. ADV. PG. 327.
National Screw & Mfg. Co., Cleveland 4, Ohio.
Nylok Corp., Box 341, Elmira, N. Y.
Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.
Shakeproof, Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.
Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.
Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, Ill.
Thompson-Bremer & Co., 1644 W. Hubbard St., Chicago 22, Ill.
TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 155.

OHMMETERS

See Instruments—Electrical Measuring

OPTICAL EQUIPMENT AND SPECIALTIES

American Optical Co., Box A, Buffalo 15, N. Y.
Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
Baird Associates, 33 University Rd., Cambridge 38, Mass.
Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
BURKE & JAMES INC., 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 418.
Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
Farrand Optical Co., Inc., Bronx Blvd., at 238th St., New York 70, N. Y.
Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
Gaertner Scientific Corp., 1239 Wrightwood Ave., Chicago 14, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass.
National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland 3, Ohio.

Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
Pacific Transducer Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
Polan Industries, Huntington 19, W. Va.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.
Scientific Specialties Corp., Snow & Union Sts., Brighton 35, Mass.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
Viewlex, Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.
Zenith Optical Co. Div. Polan Industries, Huntington 19, W. Va.
Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

OSCILLATORS—Audio Fork Controlled

AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 36, N. Y. ADV. PG. 505.
El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
Geotronic Labs., Inc., Dallas 11, Texas.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Muirhead & Co., Ltd., Beckenham, Kent, England.
PHILAMON LABORATORIES, INC., 5717 Third Ave., Brooklyn 20, N. Y. ADV. PG. 582.
Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 384.

OSCILLATORS—Audio Frequency

ALCO ELECTRONICS MFG. CO., 102 Marston St., Lawrence, Mass. ADV. PG. 102.
Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Bendix Aviation Corp., Pacific Division, 1160 Sherman Way, North Hollywood, Calif.
Bludworth Marine Div., National Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. ADV. PG. 524.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
DOUGLAS MICROWAVE CO., INC., 335 E. 95th St., New York 28, N. Y. ADV. PG. 559.
El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
Jowill Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. ADV. PG. 127.
 Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
 Muirhead & Co., Inc., Beckenham, Kent, England.
 Pacific Transducer Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
 Pulse Techniques, Inc., 1411 Palisade Ave., West Englewood, N. J.
 Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
VARI-L CO., INC., P. O. Box 1433, Stamford, Conn. ADV. PG. 523.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 Weinschel Engineering Co., Inc., 10511 Metropolitan Ave., Kensington, Md.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

OSCILLATORS—Cavity

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
C.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Decimeter, Inc., 1430 Market St., Denver 2, Colo.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 New London Instrument Co., P. O. Box 189, New London, Conn.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.

OSCILLATORS—Crystal

Bassett Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 361.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cinema-Television Ltd., Worsley Bridge Rd., London S. E. 26, England.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Gates Radio Co., Quincy, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 McCoy Electronics Co., Mount Holly Springs, Pa.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. ADV. PG. 127.
NORRMAN LABORATORIES, ERNST, Williams Bay, Wis. ADV. PG. 620.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 196-198.
 Piezo Products Co., Whitney St., Framingham, Mass.

Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 80.
TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 623.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.

OSCILLATORS, GRID DIP—High Frequency & vhf

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Lyco Mfg. Co., 82 Herman St., East Rutherford, N. J.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 130.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 New London Instrument Co., P. O. Box 189, New London, Conn.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.

OSCILLATORS—Microwave Power
 See MICROWAVE ACCESSORIES

OSCILLATORS—Oven Crystal Control

BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 361.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 McCoy Electronics Co., Mount Holly Springs, Pa.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

OSCILLATORS—Radio Frequency

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Gates Radio Co., Quincy, Ill.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago 11, ADV. PG. 414.
 Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.
 Jackson Electrical Instrument Co., 16 S. Paterson Blvd., Dayton 1, Ohio.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 Lyco Mfg. Co., 82 Herman St., East Rutherford, N. J.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 196-198.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
VARI-L CO., INC., P. O. Box 1433, Stamford, Conn. ADV. PG. 523.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

OSCILLATORS—Ultra-Low Frequency

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
 Muirhead & Co. Ltd., Beckenham, Kent, England.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

OSCILLATORS—Ultrasonic

ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Farmingdale, N. J. ADV. PG. 515.
AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 546.
ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 581.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Cinema-Television Ltd., Worsley Bridge Rd., London S. E. 26, England.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
 Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 568.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Gulton Mfg. Corp., Metuchen, N. J.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 101.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.

OSCILLOGRAPHS
 See Oscilloscopes

OSCILLOGRAPHs—Cathode Ray Camera

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BURKE & JAMES INC., 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 418.
 Cinema-Television Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Du Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
FAIRCHILD CAMERA & INSTRUMENT CORP., Robbins Lane, Syosset, N. Y. ADV. PG. 351, 352.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Inker & Rasor, P. O. Box 281, San Gabriel, Calif.

OSCILLOGRAPHs—Cathode Ray Recording, Multichannel

Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Du Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
 Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.

OSCILLOGRAPHs—Direct Writing

RUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Photon Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.

OSCILLOGRAPHs—Multi-Element

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
RUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

OSCILLOGRAPHs—Recording

RUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Central Research Laboratories, Inc., Red Wing, Minn.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.
 Photon Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
 Radiation, Inc., Melbourne, Fla.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

OSCILLOGRAPHs—Transient Study

See Oscilloscopes—Cathode Ray

OSCILLOSCOPES

See Oscilloscopes

Accessories

See Tracers—Manual, for Oscilloscopes

OSCILLOSCOPES—Cathode Ray

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 444.
 Canadian Aviation Electronics, Ltd., 8280 St. Lawrence Blvd., Montreal 14, P.Q., Canada.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Du Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
 Jovil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Corp., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 108, 109.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Teltronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Television Equipment Corp., 52 Broadway, New York 4, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 234.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 114, 115.

OSCILLOSCOPES, Cathode Ray—Multiple Channel

AMERICAN ELECTRONIC LABS., INC., 641 Arch St., Philadelphia 6, Pa. ADV. PG. 528.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Central Research Laboratories, Inc., Red Wing, Minn.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Du Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
 Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Miller Corp., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 114, 115.

OSCILLOSCOPES—Portable

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Canadian Aviation Electronics, Ltd., 8280 St. Lawrence Blvd., Montreal 14, P. Q., Canada.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Du Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 624.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
 Miller Corp., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
 Teltronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Television Equipment Corp., 52 Broadway, New York 4, N. Y.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 114, 115.

OSCILLOSCOPES—Portable Projection

AMPLITRONIX INC., 280 Ninth Ave., New York 1, N. Y. ADV. PG. 466.

BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 87.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
 Television Equipment Corp., 52 Broadway, New York 4, N. Y.

OVENS—Crystal

BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 361.
 CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
 EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. AD. PG. 332.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
 Grieve-Hendry Co., 1815 W. Lake St., Chicago 12, Ill.
 KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 550.
 L & O Research & Development Corp., 315 S. 15th St., Philadelphia 2, Pa.
 LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
 Miller Labs., August E., 9226 Hudson Blvd., North Bergen, N. J.
 Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.
 Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
 Precision Crystal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
 Standard Crystal Co., 1714 Locust St., Kansas City 1, Kans.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 80.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
 Valpey Crystal Corp., 1244 Highland St., Holliston, Mass.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Young Brothers Co., 1829 Columbus Rd., Cleveland, Ohio.

OVENS—Electric

Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
 American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago 37, Ill.
 Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Miskella-Infra-Red Co., E. 73rd & Grand Ave., Cleveland 4, Ohio.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
 TENNEY ENGINEERING, INC., 26 Avenue B, Newark 5, N. J. ADV. PG. 483.
 Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.

OVENS—Exhaust

Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
 Dispatch Oven Co., Minneapolis, Minn.
 Lydon Bros., Hackensack, N. J.
 Ross Engineering Corp., 444 Madison Ave., New York, N. Y.
 STEINER-IVES CO., Springfield Rd., Union, N. J. ADV. PG. 304.

OVENS—Infra-Red Drying

Fostoria Pressed Steel Corp., Fostoria, Ohio.
 Miskella-Infra-Red Co., The, E. 73rd & Grand Ave., Cleveland 4, Ohio.
 North American Electric Lamp Co., 1014 Tyler St., St. Louis 6, Mo.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.

PACKAGING—Electronic Equipment

Cargo Packers, Inc., 73 Rutledge St., Brooklyn 11, N. Y.
 Gould Corp., Jerome F., 242 Randolph St., Brooklyn, N. Y.
 Rentar Packaging Co., Inc., 1539 Troy Ave., Brooklyn, N. Y.

PACKAGING MATERIALS

Greenwood Packaging Supply Co., 859 Summer Ave., Newark, N. J.

HARTFORD CITY PAPER CO., Hartford City, Ind. ADV. PG. 304.
 Hinde & Dauch, Sandusky, Ohio.

PAINTS—Conductive (For Printed Circuits)

Acheson Colloids Co., 1950 Washington St., Port Huron, Mich.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 Javex, P. O. Box 646, Redlands, Calif.
 Metaplast Process, Inc., 3451 56th St., Woodside, N. Y.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
 Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
 U. S. Stoneware Co., The, Akron 9, Ohio.

PANEL LIGHTS

See LIGHTS—Dial, Panel and Pilot

PANELS—Instrument

ACKERMAN ENGRAVERS, 458 Broadway, New York, N. Y. ADV. PG. 544.
 Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Automatic Temperature Control Co., Inc., 5212 Pufaski Ave., Philadelphia 44, Pa.
 B & M METAL PRODUCTS CORP., 14 Factory St., Cedar Grove, N. J. ADV. PG. 506.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 Bennett Mfg. Co., Alden, N. Y.
 BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
 Bristol Co., The, Waterbury 20, Conn.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Circuitron, Inc., 400 Ninth St., Hoboken, N. J.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.
 Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.
 Corry Jamestown Mfg. Co., Corry, Pa.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
 Falstrom Co., 44 Falstrom Court, Passaic, N. J.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
 Mica Insulator Co., Schenectady 1, N. Y.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 416.
 MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 MYCALEX TUBE SOCKET CORPORATION, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
 NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 627.
 PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 160.
 Pfeiffer Products, 3901 W. 54th St., Los Angeles, Calif.
 PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.
 REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 ROLLER-SMITH CORP., Bethlehem, Pa. ADV. PG. 118.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Taylor Fibre Co., Norristown, Pa.
 U. S. RADIUM CORP., 535 Pearl St., New York, N. Y. ADV. PG. 381.
 Universal Aviation Equipment, Inc., 187 Lafayette St., New York 13, N. Y.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 866, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
 Willson Camera Co., Inc., 1401 Lawrence Rd., Havertown, Pa.

PANELS—Jack

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Audio Equipment Sales, 153 W. 33rd St., New York 1, N. Y.
 B & M METAL PRODUCTS CORP., 14 Factory St., Cedar Grove, N. J. ADV. PG. 506.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Bennett Mfg. Co., Alden, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 COAXIAL CONNECTOR CO., 35 North Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 CONNECTICUT TELEPHONE & ELECTRIC CORP., 78 Brittainia St., Meriden, Conn. ADV. PG. 590.
 Gates Radio Co., Quincy, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 JAN HARDWARE MFG. CO., INC., 25-30 163rd St., Flushing 58, N. Y. ADV. PG. 567.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Mica Insulator Co., Schenectady 1, N. Y.
 North Electric Mfg. Co., 501 S. Market St., Gallons, Ohio.
 Pfeiffer Products, 3901 W. 54th St., Los Angeles, Calif.
 REF Manufacturing Corp., Jericho Turnpike, Mineola, N. Y.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 600.

PANELS—Receiver & Transmitter

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 B & M METAL PRODUCTS CORP., 14 Factory St., Cedar Grove, N. J. ADV. PG. 506.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Bennett Mfg. Co., Alden, N. Y.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Gates Radio Co., Quincy, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
 Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
 MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 416.
 MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 MYCALEX TUBE SOCKET CORPORATION, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.

PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 160.
Pfeifer Products, 3901 W. 54th St., Los Angeles, Calif.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.
PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 592.
Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Universal Aviation Equipment, Inc., 187 Lafayette St., New York 13, N. Y.

PANELS—Relay Rack

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
Altac Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
B & M METAL PRODUCTS CORP., 14 Factory St., Cedar Grove, N. J. ADV. PG. 506.
Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
Bennett Mfg. Co., Alden, N. Y.
Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 446.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
Corry Jamestown Mfg. Co., Corry, Pa.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
Donnelly Electric & Mfg. Co., 3050 Washington St., Boston, Mass.
Gates Radio Co., Quincy, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 416.
North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 160.
Pfeifer Products, 3901 W. 54th St., Los Angeles, Calif.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.
PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 592.
REF Manufacturing Corp., Jericho Turnpike, Mineola, N. Y.
Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Stromberg-Carlson Co., Rochester 3, N. Y.
Universal Aviation Equipment, Inc., 187 Lafayette St., New York 13, N. Y.
WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 262.

PAPER

See Insulation Materials

PAPER—Facsimile Recording

ALFAX PAPER & ENGINEERING CO., Washington St., P. O. Box 125, Westboro, Mass. ADV. PG. 619.
Bludworth Marine Div., National-Simplex-Bludworth Inc., 92 Gold St., New York 36, N. Y.
Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
Muirhead & Co., Ltd., Beckenham, Kent, England
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 384.

pH

See Indicators

PHENOLIC MOLDING COMPOUNDS

See Insulating Compounds

PHONOGRAPHS—Electric Phonographs & Record Players

Admiral Corp., 3800 Cortland St., Chicago 47, Ill.
Ansley Mfg. Co., Arthur, Doylestown, Pa.
Audio Industries Inc., Michigan City, Ind.
Audio-Master Corp., 341 Madison Ave., New York 17, N. Y.

Autocrat Electronics Co., 5024 Elm St., Skokie 8, Ill.
Birmingham Sound Reproducers, Ltd., Claremont Works, Old Hill, Staffs, England.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
Crosley Division, Avco Mfg. Co., 1329 Arlington St., Cincinnati 25, Ohio.
Duotone Co., Inc., Keyport, N. J.
Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn, Ill.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Fidelity Amplifier Co., 703 Willow St., Chicago 14, Ill.
Gale Dorothea Mechanisms Inc., 81-01 Broadway, Elmhurst, N. Y.
Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.
Garrard Sales Corp., 164 Duane St., New York 13, N. Y.
General Industries Co., Taylor & Olive Sts., Elyria, Ohio.
Les, Via Bergamo 21, Milan, Italy.
MP Engineering Co., Fairfield 3, Conn.
Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee, Wis.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
Radio Corp. of America, Home Instrument Dept., Camden, N. J.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Rek-O-Kut Co., Inc., 38-03A Queens Blvd., Long Island City, N. Y.
Shevers, Inc., Harold, 123 W. 64th St., New York 23, N. Y.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stromberg-Carlson Co., Rochester 3, N. Y.
Symphonic Radio & Electronic Corp., 160 Washington St., Boston 14, Mass.
Symphony Radio & TV Co., 925 South Western Ave., Los Angeles 6, Calif.
United Pressed Products Co., 741 W. Harrison St., Chicago 7, Ill.
V-M Corp., Benton Harbor, Mich.
Waters Conley Co., 501 First St. N. W., Rochester, Minn.
Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.
Weingarten Electronics Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.
Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.
White Rock Mfg. Corp., White Rock, S. C.
Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.

PHOTOELECTRIC

See Controls

PHOTOFLASH EQUIPMENT—Electronic

American Speedlight Corp., 480 Lexington Ave., New York 17, N. Y.
Anglo Corp., 2037 West Division St., Chicago 22, Ill.
Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
Edgerton, Gernsmausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.
Jen Products, Inc., 419 W 42nd St., New York, N. Y.
Kemfite Labs., 1819 Grand Ave., Chicago 22, Ill.
Modelectric Products Corp., 1500 Banks Ave., Asbury Park, N. J.
Photobell Company, 116 Nassau St., New York 7, N. Y.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Photographic Products, Inc., 6916 Romanne St., Hollywood 38, Calif.

PHOTOGRAPHIC MATERIALS—Films and Papers For Recording Instruments

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.

Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
Haloid Co., The, 6 Haloid St., Rochester, N. Y.
Pearless Photo Products, Shoreham, N. Y.

PHOTOGRAPHIC MATERIALS—Spectrographic Instruments

Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland 3, Ohio.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

PHOTOGRAPHIC MATERIALS—X-Ray Films

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
Ultrasonic Engineering Co., Box 46, Maywood, Ill.
X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

PHOTOMETERS

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Patwin Instruments a Div. of The Patent Button Co., 41 Brown St., Waterbury 20, Conn.
Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 596.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

pH METERS, RECORDERS AND COMPARATORS

See Meters

PHOTOCOPIERS

See Machines

PHOTOTUBES AND PHOTOCELLS

See Tubes

PICKUPS—Crystal

See Crystal Cartridges

PICKUPS—Industrial

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 288.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.

PICKUPS—Magnetic

Audak Co., 500 Fifth Ave., New York, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 288.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
Les, Via Bergamo 21, Milan, Italy.
Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.
Pacific Transducer Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.

PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 160.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.

PICKUPS—Photoelectric

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

PICKUPS—Quartz Crystal

Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.
 Lesa, Via Bergamo 21, Milan, Italy.
 Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Sperry Products, Inc., Danbury, Conn.

PICKUPS—Transcription and Phonograph

Astatic Corporation, The, Conneaut, Ohio.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
 Electro-Voice, Inc., Buchanan, Mich.
 Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Gulton Mfg. Corp., Metuchen, N. J.
 Pacific Transducer Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
 Pfanzstiel Chemical Co., 104 Lake View Ave., Waukegan, Ill.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 160.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 271.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, Ill. ADV. PG. 210.
 Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
 Weathers Industries, 66 E. Gloucester Pike, Barrington, N. J.
 Webster Electric Co., 1900 Clark St., Racine, Wis.

PILOT LIGHTS

See **LIGHTS—Dial, Panel and Pilot**

PILOT LIGHT ASSEMBLIES

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. Y. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 American Electronics Corp., 157 Marconi Blvd., Columbus, Ohio.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Bardwell & McAlister, Inc., 2950 Ontario, Burbank, Calif.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Carling Electric, Inc., 499 Park Ave., West Hartford 10, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
DIALIGHT CORPORATION, 60 Stewart Ave., Brooklyn 37, N. Y. ADV. PG. 348.
DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 61.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 T.L.G. Electric Corp., 31 W. 27th St., New York 1, N. Y.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.

UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 399.

PILOTS—Automatic

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

PINS—Tubular

AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 521.
 British Electronics Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Javex, P. O. Box 646, Redlands, Calif.

PITCH

See **Insulating Compounds**

PLASTIC INSULATION PARTS

See **INSULATION PARTS—Plastic Insulation Parts**

PLASTIC MATERIALS

Allys

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
CAST OPTICS CORP., 1 Post Rd., Riverside, Conn. ADV. PG. 597.
 Shell Chemical Corp., 500 Fifth Ave., New York 36, N. Y.

Cellulose Acetate

American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
 American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 Eastman Chemical Products, Inc., Kingsport, Tenn.
 Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
 Gering Products, Inc., N. Seventh St., at Monroe Ave., Kenilworth, N. J.
 Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Shoe Form Co., Inc., Auburn, N. Y.

Cellulose Acetate Butyrate

Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Eastman Chemical Products, Inc., Kingsport, Tenn.
 Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
 Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Shoe Form Co., Inc., Auburn, N. Y.

Cellulose Nitrate

American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Delaware.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.

Ethyl Cellulose

American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
 American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Dow Chemical Co., Midland, Mich.
 Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.

Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.
 Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.

Melamine Formaldehyde

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 Mica Insulator Co., Schenectady 1, N. Y.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24 Sylvan Ave., Toledo 6, Ohio.
 Synthane Corp., Oaks, Pa.

Methyl Methacrylate

Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
CAST OPTICS CORP., 1 Post Rd., Riverside, Conn. ADV. PG. 597.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.

Phenol Formaldehyde—(Phenolics)

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Durez Plastics & Chemicals, Inc., 1921 Walck Rd., N. Tonawanda, N. Y.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Marlette Corp., 37-21 30th St., Long Island City, N. Y.
 Mica Insulator Co., Schenectady 1, N. Y.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
PANELYTE DIV., ST. REGIS PAPER CO., 230 Park Ave., New York 17, N. Y. ADV. PG. 339.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Reichhold Chemicals, Inc., 630 Fifth Ave., New York 20, N. Y.
ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 426.
 Rogers Corp., Manchester, Conn.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Polyethylene

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
 Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Resin Industries, Santa Barbara, Calif.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 583.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Trimout Plastic Co., 71 Dudley St., Arlington, Mass.
 U. S. Stoneware Co., The, Akron 9, Ohio.

Polystyrene

American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
CAST OPTICS CORP., 1 Post Rd., Riverside, Conn. ADV. PG. 597.
Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
Dow Chemical Co., Midland, Mich.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.
Monsanto Chemical Co., Plastics Div., Springfield, Mass.
Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
PANELYTE DIV., ST. REGIS SALES CORP., 230 Park Ave., New York 17, N. Y. ADV. PG. 339.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

Polytetrafluoroethylene

Dilectrix Co., 211-48 Jamaica Ave., Queens Village 8, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. ADV. PG. 600.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
RESISTOFLEX CORP., 39 Planson St., Belleville 9, N. J. ADV. PG. 583.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
U. S. Stoneware Co., The, Akron 9, Ohio.

Polytrifluorochloroethylene

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
KELLOGG CO., M. W., P. O. Box 469, Jersey City 3, N. J. ADV. PG. 139-142.
RESISTOFLEX CORP., 39 Planson St., Belleville 9, N. J. ADV. PG. 583.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
U. S. Stoneware Co., Akron 9, Ohio.

Resins

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
CIBA COMPANY, INC., 627 Greenwich St., New York 14, N. Y. ADV. PG. 377.
Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
Forman Co., B. G., 238 William St., New York 38, N. Y.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
Melpar, Inc., 452 Swann Ave., Alexandria, Va.
Monsanto Chemical Co., Plastics Div., Springfield, Mass.
Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
Reichhold Chemicals, Inc., 630 Fifth Ave., New York 20, N. Y.
Sheil Chemical Corp., 500 Fifth Ave., New York 36, N. Y.
Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
U. S. Stoneware Co., Akron 9, Ohio.

Urea Formaldehyde

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.

Monsanto Chemical Co., Plastics Div., Springfield, Mass.
Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
Plaskon Division, Libbey-Owens-Ford Glass Co., 2112-24 Sylvan Ave., Toledo 6, Ohio.
Reichhold Chemicals, Inc., 630 Fifth Ave., New York 20, N. Y.

Vinyl Compounds

American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
APEX COATED FABRICS CO., 12 E. 22nd St., New York 10, N. Y. ADV. PG. 558.
Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
Dow Chemical Co., Midland, Mich.
General Tire & Rubber Co., The, Akron, Ohio.
Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
Goodrich Chemical Co., B. F., Rose Bldg., Cleveland 15, Ohio.
Goodyear Tire & Rubber Co., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
Houghton Laboratories Inc., 322 Bush St., Olean, N. Y.
Monsanto Chemical Co., Plastics Div., Springfield, Mass.
Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
Reichhold Chemicals, Inc., 630 Fifth Ave., New York 20, N. Y.
Resin Industries, Santa Barbara, Calif.
Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
Trimount Plastic Co., 71 Dudley St., Arlington, Mass.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
U. S. Stoneware Co., The, Akron 9, Ohio.

PLATES—Instruction

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
Anderson & Sons, Inc., Westfield, Mass.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
Croname Inc., 3701 Ravenswood Ave., Chicago, Ill.
Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
Hermes Plastics, Inc., 13-19 University Place, New York 3, N. Y.
Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
Insulating Fabricators Inc., 150 Union Ave., East Rutherford, N. J.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
Matthews & Co., James H., 470 Atlantic Ave., Boston 10, Mass.
Mica Insulator Co., Schenectady 1, N. Y.
Moore Co., Howard J., 266 William St., New York 38, N. Y.
New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 627.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.
Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 381.
Universal Aviation Equipment, Inc., 187 Lafayette St., New York 13, N. Y.
Willson Camera Co., Inc., 1401 Lawrence Road, Haver- ton, Pa.

PLATES—Metal-Plastic

Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
Bennett Mfg. Co., Alden, N. Y.
Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
Circuitron, Inc., 400 Ninth St., Hoboken, N. J.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Duramark, Inc., 2 Secatoag Ave., Port Washington, N. Y.
Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
Hermes Plastics, Inc., 13-19 University Place, New York 3, N. Y.
Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Mica Insulator Co., Schenectady 1, N. Y.
Moore Co., Howard J., 266 William St., New York 38, N. Y.

NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 627.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
Rogers Corp., Manchester, Conn.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
Trimount Plastic Co., 71 Dudley St., Arlington, Mass.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 381.
Universal Aviation Equipment, Inc., 187 Lafayette St., New York 13, N. Y.
Willson Camera Co., Inc., 1401 Lawrence Rd., Haver- town, Pa.

PLATES—NAME—Metal or Plastic

ACKERMAN ENGRAVERS, 458 Broadway, New York, N. Y. ADV. PG. 544.
Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y.
Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
Anderson & Sons, Inc., Westfield, Mass.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
Bennett Mfg. Co., Alden, N. Y.
CAST OPTICS CORP., 1 Post Rd., Riverside, Conn. ADV. PG. 597.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
Decimeter, Inc., 1430 Market St., Denver 2, Colo.
Duramark, Inc., 2 Secatoag Ave., Port Washington, N. Y.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
Hermes Plastics, Inc., 13-19 University Place, New York 3, N. Y.
Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
Matthews & Co., James H., 470 Atlantic Ave., Boston 10, Mass.
Mica Insulator Co., Schenectady 1, N. Y.
Moore Co., Howard J., 266 William St., New York 38, N. Y.
New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 627.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.
Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 2, Calif.
Sillcocks-Miller Co., 10 Parker Ave., W., So. Orange, N. J.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
Universal Aviation Equipment, Inc., 187 Lafayette St., New York 13, N. Y.

PLATING—Metal on Plastic

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
BART LABS., CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 593.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
Bennett Mfg. Co., Alden, N. Y.
Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
Circuitron, Inc., 400 Ninth St., Hoboken, N. J.
COHAN-EPNER CO., INC., 142 W. 14th St., New York 11, N. Y. ADV. PG. 602.
Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
Donham Craft, Inc., Thomaston, Conn.
Electrochemical Industries, Inc., Jacques St., Worcester, Mass.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y. ADV. PG. 397.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
Laconia Corp., 37 S. 6th St., Newark 7, N. J.
Metaplast Process, Inc., 3451 56th St., Woodside, N. Y.
National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
Poinsettia Co., Inc., 112 Cedar Ave., Pitman 6, N. J.
Sears Co., M. J., Delaware County, Roxbury, N. Y.

Techron Co., 254-256 Friend St., Boston 14, Mass.
 Tornngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.

PLATING—Precision Metal

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
BART LABS. CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 593.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
Circuitron, Inc., 400 Ninth St., Hoboken, N. J.
COHAN-EPNER CO., INC., 142 W. 14th St., New York 11, N. Y. ADV. PG. 602.
Donham Craft, Inc., Thomaston, Conn.
Electro-Coatings, Inc., 1662 W. Fullerton Ave., Chicago 14, Ill.
Eveready Plating Co., 1790 First Ave., New York, N. Y. Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
M-W LABORATORIES, 1824 N. Milwaukee Ave., Chicago 27, Ill. ADV. PG. 478.
MERIT PLATING CO., 218 E. 141st St., New York 51, N. Y. ADV. PG. 496.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Sears Co., M. J., Delaware County, Roxbury, N. Y.
U. S. COMPONENTS, INC., 454 E. 148th St., New York 55, N. Y. ADV. PG. 313.
Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.

PLUGS—Telephone

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 414.
Audio Equipment Sales, 153 W. 33rd St., New York 1, N. Y.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 521.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Cable Electric Products Co., Providence, R. I.
Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y.
Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
Lesia, Via Bergamo 21, Milan, Italy.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
Sromberg-Carlson Co., Rochester 3, N. Y.
SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. ADV. PG. 306.
WALTHAM HOROLOGICAL CORP., 711 Broad St., Lynn, Mass. ADV. PG. 553.

PLUGS—Terminal

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
Automatic & Precision Mfg. Co., 315 E. 91st St., New York 28, N. Y.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 521.

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
COAXIAL CONNECTOR CO., 35 North Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 4, N. J. ADV. PG. 135.
General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 274.
HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark 7, N. J. ADV. PG. 235.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Javex, P. O. Box 646, Redlands, Calif.
Jen Products, Inc., 419 W. 42nd St., New York, N. Y.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 332.
Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 18, Calif.
Production Tool & Fixture Co., 37 W. Main St., Oyster Bay, N. Y.
Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
States Co., 19 New Park Ave., Hartford 6, Conn.
Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.

PLUGS AND JACKS

See Terminals

POINTERS—Dial

BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 569.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 426.
Simpson Electric Co. Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 399.
U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.

POSITIONING

See Controls—Indicators

POSTS

See Terminals

POTENTIOMETERS

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.

BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
Bristol Co., The, Waterbury 20, Conn.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Ore.
Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CENTRAL DIV. OF GLOBE UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 42, 43.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Colvin Laboratories, 12 Court St., Morristown, N. J.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
DEJUR-AMSCO CORP., Northern Blvd., at 45th St., Long Island City 1, N. Y. ADV. PG. 370, 371.
EDCLIFF INSTRUMENTS, 383 N. Foothill Blvd., Pasadena 8, Calif. ADV. PG. 589.
ELECTRO-MEC LABORATORY, 210 43rd Ave., Long Island City, N. Y. ADV. PG. 486.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
Giannini & Co., Inc., G. M., Bin N., Pasadena, Calif.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
HELIPOT CORP., 916 Meridian Ave., South Pasadena, Calif. ADV. PG. 67-70.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Lesia, Via Bergamo 21, Milan, Italy.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Markite Corp., 155 Waverly Place, New York 14, N. Y.
Micromax Co., 1964 Utica Ave., Brooklyn, N. Y.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 92.
Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.
Precision Electronic Components, Ltd., 560 King St., West, Toronto, Ont., Canada.
Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.
Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Pallsades Park, N. J.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. ADV. PG. 604.
Van Dyke Instruments, Inc., 1927 First Ave., S., P. O. Box 355, St. Petersburg 1, Fla.
VECTOR, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.

POTENTIOMETERS—Induction

Arma Corp., 254 36th St., Brooklyn 32, N. Y.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Doelcam Inc., 56 Eimwood St., Newton 58, Mass.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.

POTENTIOMETERS—Linear & Non Linear Precision Wire Wound

Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
BELOCK INSTRUMENT CORP., 13-11 111th St., College Point, N. Y. ADV. PG. 267.
Birkian Corp., 200 E. Third St., Mt. Vernon, N. Y.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 368.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Colvin Laboratories, 12 Court St., Morristown, N. J.
Cornell Electronics Corp., 40-33 Main Ave., Douglaston, N. Y.
Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
EDCLIFF INSTRUMENTS, 383 N. Foothill Blvd., Pasadena 8, Calif. ADV. PG. 589.
ELECTRO-MEC LABORATORY, 120 43rd Ave., Long Island City, N. Y. ADV. PG. 486.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. ADV. PG. 157.
FAIRCHILD CAMERA & INSTRUMENT CORP., Park Ave., Hicksville, N. Y. ADV. PG. 351, 352.

Ford Engineering Co., 129 East A St., Upland, Calif.
GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 268.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.
HELIPOT CORP., 916 Meriden Ave., South Pasadena, Calif. ADV. PG. 67-70.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.

Lesca, Via Bergamo 21, Milan, Italy.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Micromax Co., 1964 Utica Ave., Brooklyn, N. Y.
Muirhead & Co., Ltd., Beckenham, Kent, England.
Rattray & Co., Inc., George, 92-32 Union Hall St., Jamaica 5, N. Y.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 592.
Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.
Servotrol Co., 114 W. Illinois St., Chicago 10, Ill.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
Specialties, Inc., Skun's Misery Rd., Syosset, N. Y.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. ADV. PG. 604.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WATERS MANUFACTURING, INC., 4 Gordon St., Waltham 54, Mass. ADV. PG. 484.

POTENTIOMETERS—Portable Instrument

BOURNS LABORATORIES, 6136 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
Bristol Co., The, Waterbury 20, Conn
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. ADV. PG. 604.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.
Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

POTS—Soldering

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
Dee Electric Co., 1101 N. Paulina St., Chicago 22, Ill.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
Electric Soldering Iron Co., W. Elm St., Deep River, Conn.
Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Sta-Warm Electric Co., Ravenna, Ohio.
Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.
VULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass. ADV. PG. 279.
Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.

POTS AND TANKS—Heating

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Lukens Steel Co. and Divisions, By-Products Steel Co. & Lukenwald, 447 Lukens Bldg., Coatesville, Pa.
Randall Mfg. Co., Inc., 801 Edgewater Rd., New York 59, N. Y.
Sta-Warm Electric Co., Ravenna, Ohio.
Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

POWER LEVEL

See Indicators

POWER SUPPLIES

1. AC
2. DC
3. High Voltage
4. Microwave
5. Regulated
6. R-F

ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. 1-2. ADV. PG. 453.
ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. 2-5. ADV. PG. 202, 203.
AIR ASSOCIATES, INC., Teterboro, N. J. 1-2-3-4-5-6. ADV. PG. 329.
Airmec Ltd., High Wycombe, Buckinghamshire, England. 5.
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-2-3-4-5-6. ADV. PG. 119.
ALCO ELECTRONICS MFG. CO., 102 Marston St., Lawrence, Mass. 1-2-5-6. ADV. PG. 102.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. 2-3-5.
American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif. 1-6.
American Electroengineering Corp., 2040 Colorado Ave., Santa Monica, Calif. 1-2-3-4-5-6.
AMERICAN ELECTRONIC LABS., INC., 641 Arch St., Philadelphia 6, Pa. 2-5-6. ADV. PG. 528.
AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. 1-2. ADV. PG. 278.
AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. 5. ADV. PG. 94, 95.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. 1-2-5-6. ADV. PG. 360.
ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. 5. ADV. PG. 282.
Associated Engineering Corp., 38 Euston Rd., Brighton 35, Mass. 2-3-5-6.
Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill. 3-5-6.
ASSOCIATED SPECIALTIES CO., 1751 Main St., Orefield, Pa. 2. ADV. PG. 591.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. 2-3-5-6. ADV. PG. 302.
Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J. 1-2-5.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 2-3-5-6. ADV. PG. 239.
Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif. 1-5-6.
BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. 1-2-3-5. ADV. PG. 87.
Beva Laboratory, P. O. Box 478, Trenton 9, N. J. 3-5.
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 1-2-3-4-5-6.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 1-2-3-4-5-6.
Booth Co., A. E., 265 S. Alexandria Ave., Los Angeles, Calif. 1-2-3-6.
BRACKER-SEIB X-RAY CO., INC., 293 Third Ave., New York 10, N. Y. 1-2-3-6. ADV. PG. 566.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. 3-5-6. ADV. PG. 547.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 1-2-3-4-5-6.
BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. 4-5. ADV. PG. 444.
BURROUGHS CORP., Electronic Instruments Div., 511 N. Broad St., Philadelphia 23, Pa. 2. ADV. PG. 211-214.
Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. 1-2-5.
CHATHAM ELECTRONICS CORP., Livingston, N. J. 1-2-3-5-6. ADV. PG. 112, 113.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. 2. ADV. PG. 289.
Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, Enoland. 1-2-5.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. 3. ADV. PG. 616.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif. 1-2-3-6.
COLLINS RADIO CO., Cedar Rapids, Iowa. 1. ADV. PG. 82, 83.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. 5. ADV. PG. 524.
COMPUTER CORP. OF AMERICA, 149 Church St., New York, N. Y. 5. ADV. PG. 594.
Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario. 5.
CONDENSER PRODUCTS CO., 7517 N. Clark St., Chicago 26, Ill. 1-2-3-5-6. ADV. PG. 273.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. 1-2. ADV. PG. 590.
Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas. 3.
Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J. 2-5.
DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif. 4-5.

DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. 2-3-5-6. ADV. PG. 609.
Doelcam Corp., 56 Elmwood St., Newton 58, Mass. 1.
Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass. 3-5-6.
Dresser Electric Co., 942 Larned St., Detroit 7, Mich. 2.
Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y. 5.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. 2. ADV. PG. 120.
El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J. 2-3-5-6.
El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa. 2-3-5-6.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y. 1-2-3-4-5-6.
Electro Craft, Inc., 68 Jackson St., Stamford, Conn. 1-2-3.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. 2-6. ADV. PG. 288.
Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif. 3.
ELECTRO-TECH EQUIPMENT CO., 55 Lispenard St., New York 13, N. Y. 1-2-6. ADV. PG. 522.
Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 4, Calif. 5.
Electronic Measurements Co., Inc., Lewis St. & Maple Ave., Eatontown, N. J. 2-5-6.
Embassy Engineering Corp., 224 E. 204th St., New York 58, N. Y. 2-3-5-6.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. 2. ADV. PG. 116.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. 1. ADV. PG. 415.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 2-5-6. ADV. PG. 148-153.
FLUKE ENGINEERING CO., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. 1-2-3-5. ADV. PG. 578.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. 1-2-3-4-5-6. ADV. PG. 575.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. 1-2-5. ADV. PG. 219.
Furst Electronics, 3322 W. Lawrence Ave., Chicago 25, Ill. 1-2-3-4-5-6.
G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif. 1-2-5-6.
GALBRAITH & SON ELECTRIC CORP., C. C., 450 Avenue of the Americas, New York 11, N. Y. 1-2-5. ADV. PG. 542.
Gates Radio Co., Quincy, Ill. 1-2-3-5.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-2-3-5-6. ADV. PG. 1-18.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. 1-2-3-5-6. ADV. PG. 1-18.
GENERAL ELECTRONICS, INC., 32 W. 22nd St., New York 10, N. Y. 1-2-3-5-6. ADV. PG. 568.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. 1-2-3-5-6. ADV. PG. 608.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. 5. ADV. PG. 251.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 1-2-6. ADV. PG. 90, 91.
General Transformer Co., 18240 Harwood Ave., Home-wood, Ill. 2-5-6.
Georator Corp., Box 463, Manassas, Va. 1-2.
Green Electric Co., W., 130 Cedar St., New York, N. Y. 2.
Harvey-Wells Electronics, Inc., North St., Southbridge, Mass. 1-2.
HEATH CO., Benton Harbor, Mich. 1-2-5-6. ADV. PG. 486.
Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J. 2-6.
HIGHLAND ENGINEERING CO., Main St. & Urban Ave., Westbury, N. Y. 1-2. ADV. PG. 568.
Hivolt Ltd., 34A Pottery Lane, London W, 11, England. 3-5-6.
Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif. 1-2.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif. 1-2-3-4-5.
Industrial Electronics Co., Inc., Hanover, Mass. 1-2-5-6.
INDUSTRIAL RECTIFIER CO., 120 Cedar St., New York, N. Y. 2-5-6. ADV. PG. 616.
Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y. 1-2-3-6.
Industrial Transformer Co., Gouldsboro, Pa. 1-2-3-5-6.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. 1-2-3-5.
James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18, Ill. 2.
Jarrel-Ash Co., 165 Newberry St., Boston 16, Mass. 1-2-3-5-6.
Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J. 1-5.
Jobbins Electronic Enterprises, Menlo Park, Calif. 1-2-3-4-5-6.
Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa. 1-2-3-4-5-6.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. 1-5. ADV. PG. 568.
KEPCO LABS., INC., 131-38 Sanford Ave., Flushing 55, N. Y. 1-2-3-4-5-6. ADV. PG. 25-27.
Kinevox Corp., 116 S. Hollywood Way, Burbank, Calif. 6.
LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. 2-3-5-6. ADV. PG. 573.
LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. 2-5. ADV. PG. 360.
LAWN ELECTRONICS CO., East Freehold Road, Freehold, N. J. 2-5-6. ADV. PG. 575.

Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif. 2-5.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif. 1-2-3-4-5-6.
 McCollipin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif. 2-5-6.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif. 1-2-6.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. 1-2. ADV. PG. 328.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. 1-2-5-6. ADV. PG. 437.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif. 5.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 2-6.
 Manson Laboratories, 207 Greenwich Ave., Stamford, Conn. 1-2-3-5-6.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. 5.
 Measurement Engineering, Ltd., Arnrior, Ontario, Canada. 5-6.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. 1-2-3-4-5-6. ADV. PG. 127.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 3.
MODEL RECTIFIER CORP., 557 Rogers Ave., Brooklyn 25, N. Y. 2-5-6. ADV. PG. 536.
 Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill. 1-2-5-6.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England. 3.
 Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich. 1-2.
 National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland 3, Ohio. 1-2-3-5-6.
NEUTRONIC ASSOCIATES, 83-56 Victor Ave., Elmhurst, N. Y. 2-3-4-5-6. ADV. PG. 500.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. 2.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio. 2.
 Northeastern Engineering Inc., Manchester, N. H. 1-2-3-4-5-6.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa. 2-3-5.
 Nucleonic Company of America, 497 Union St., Brooklyn 31, N. Y. 3-5-6.
OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. 2-5-6. ADV. PG. 479.
 Oregon Electronic Mfg. Co., 2232 E. Burnside St., Portland 15, Ore. 2-5-6.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. 1-2-5. ADV. PG. 569.
 Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif. 5.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. 2-3-5-6. ADV. PG. 285.
PERKIN ENGINEERING CORP., 345 Kansas St., El Segundo, Calif. 2-3-5-6. ADV. PG. 604.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. 1-2-3-5-6. ADV. PG. 614.
 Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass. 2-5.
 Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y. 3.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill. 5.
 Plastic Capacitors, Inc., 2511 W. Moffat St., Chicago 47, Ill. 2-3-6.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. 5. ADV. PG. 108, 109.
 Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich. 5.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. 3. ADV. PG. 502.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. 5.
 Pulse Techniques, Inc., 1411 Palisade Ave., West Englewood, N. J. 6.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill. 2-3-5-6.
 Rangertone, Inc., 73 Winthrop St., Newark 4, N. J. 1.
RAPID ELECTRIC CO., 2881 Middletown Rd., New York, N. Y. 2. ADV. PG. 628.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. 2-5. ADV. PG. 420.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. 1-2-5. ADV. PG. 134.
 Resdel Engineering, 2351 Riverside, Los Angeles 39, Calif. 1-2-3-4-5-6.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio. 3.
 "S" Corrugated Quenched Gap Co., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J. 3.
 Schauer Manufacturing Corp., 4521 Alpine Ave., Cincinnati 36, Ohio. 2-5.
 Scientific Specialties Corp., Snow & Union Sts., Brighton 35, Mass. 2-3-5.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass. 2.
 Senn Corp., New Augusta, Ind. 2-3.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. 1-2. ADV. PG. 426.
SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, Ill. 1-5-6. ADV. PG. 536.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 1-2-3-5-6. ADV. PG. 62, 63.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. 1-2-3-5-6.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. 1-2-3-5-6. ADV. PG. 430, 431.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. 3. ADV. PG. 476.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. 4. ADV. PG. 283, 284.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J. 1-2-3-5-6.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 3-5.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J. 1-2-3.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. 1-2-3-5-6.
SUPERIOR ELECTRIC CO., THE, 4000 Mae Ave., Bristol, Conn. 1-2. ADV. PG. 192, 193.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. 2-5.
TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East Rutherford, N. J. 2-5. ADV. PG. 623.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. 2-3-5-6. ADV. PG. 562.
 Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif. 2-5-6.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. 1-2-5-6. ADV. PG. 287.
 Thompson Products, Inc., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio. 5.
 Thordarson-Meissner Mfg. Divs., 500 W. Huron St., Chicago 10, Ill. 3-5.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. 1-2-5-6. ADV. PG. 234.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y. 1-2-3-4-5-6.
UNIVERSAL ELECTRONICS CO., 2012 S. Sepulveda Blvd., Los Angeles 25, Calif. 2-5-6. ADV. PG. 606.
 Utting Associates, George, 290 Centre St., Newton 58, Mass. 3.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. 4-5. ADV. PG. 392, 393.
VECTRON, INC., 404 Main St., Waltham 54, Mass. 4-5. ADV. PG. 457.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. 2-5. ADV. PG. 376.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. 2-3-5. ADV. PG. 206, 207.
 Video Corp. of America, 229 W. 28th St., New York 1, N. Y. 2-3-4-5-6.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind. 1-2-5.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich. 1-2-3.
WAVELINE, INC., Box 470, Caldwell, N. J. 4. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass. 4-5-6.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 4.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y. 1-2.

PRE-AMPLIFIERS for COMMUNICATION RECEIVERS

Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
CONDENSER PRODUCTS CO., 7517 N. Clark St., Chicago 26, Ill. ADV. PG. 273.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
LANGEVIN MFG. CORP., 37 W. 65 St., New York 23, N. Y. ADV. PG. 360.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Northeastern Engineering Inc., Manchester, N. H.
 Radio Mfg. Engineers Inc., 300-302 First Ave., Peoria 6, Ill.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

PRE-AMPLIFIERS for OSCILLOSCOPES

Airmec Laboratories, Ltd., Nigh Wycombe, Buckinghamshire, England.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Commercial Research Labs., Inc., 20 Bartlett Ave., Detroit 3, Mich.
CONDENSER PRODUCTS CO., 7517 N. Clark St., Chicago 26, Ill. ADV. PG. 273.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
 Ellis Associates, Box 77, Pelham 65, N. Y.

Feiler Engineering Co., 8026 Monticello Ave., Skokie Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Furst Electronics, 3322 W. Lawrence Ave., Chicago 25 Ill.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 6 Calif.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 72.
LINEAR EQUIPMENT LABS., Brightwater Place, Massachusetts, N. Y. ADV. PG. 624.
 Owen Laboratories, 412 Woodward Blvd., Pasadena 10 Calif.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 623.
 Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

PRE-SELECTORS

AIR ASSOCIATES INC., Teterboro, N. J. ADV. PG. 329.
 Electro-Voice, Inc., Buchanan, Mich.

PRESSES—Metal Forming

Acromark Co., 9-13 Gorrell St., Elizabeth 4, N. J.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 617.
 Shore Engineering Inc., 232 West Ave., Long Branch, N. J.

PRESSURE

See Controls

PRINTED, STAMPED or ETCHED CIRCUITS

See Circuits

PROBES

See also Lines—Slotted

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 621.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33 Pa.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford Ill.
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Hastings Instrument Co., Inc., Hampton 9, Va.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Javex, P. O. Box 646, Redlands, Calif.
JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. ADV. PG. 188, 190.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 Leighton Labs., H. W., 26 Herman St., Glen Ridge, N. J.
LINEAR EQUIPMENT LABS., Brightwater Place, Massachusetts, N. Y. ADV. PG. 624.
MILLIVAC INSTRUMENT CORP., 444 Second St., Boston 997, Schenectady, N. Y. ADV. PG. 611.
 Pacific Electricrad Co., P. O. Box 15805, Cranshaw Sta., Los Angeles 8, Calif.
 Scala Radio Co., 2814 19th St., San Francisco 10 Calif.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
 Television Equipment Corp., 52 Broadway, New York 4, N. Y.
 United Technical Labs., Box 425-V, Morristown, N. J.

PROBES—High Frequency

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Javex, P. O. Box 646, Redlands, Calif.
 JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. ADV. PG. 188-190.
 Jowit Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 624.
 MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
 Oregon Electronic Mfg. Co., 2232 E. Burnside St., Portland 15, Ore.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 United Technical Labs., Box 425-V, Morristown, N. J.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.

PROBES—High Voltage

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Industrial Transformer Co., Gouldsboro, Pa.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Javex, P. O. Box 646, Redlands, Calif.
 JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. ADV. PG. 188-190.
 Jowit Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 624.
 PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
 Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 430, 431.

PROBES—Microwave

See Microwave Accessories

PROJECTION TUBES

See Tubes, Television Projection

PROTECTIVE SEALERS

See Insulating Compounds

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PSYCHO GALVANOMETERS

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.

PUBLIC ADDRESS SYSTEMS

See also Sound Systems, Complete

ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, Ill. ADV. PG. 542.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
 Audio-Master Corp., 341 Madison Ave., New York 17, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
 Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.
 Dilks Co., The, Seymour, Conn.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 EL-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Elex Co., 69-19 215th St., Bayside, N. Y.
 Executone, Inc., 415 Lexington Ave., New York 17, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 GALBRAITH & SON ELECTRIC CORP., C. C., 450 Avenue of the Americas, New York 11, N. Y. ADV. PG. 542.
 Gates Radio Co., Quincy, Ill.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 Lesa, Via Bergamo 21, Milan, Italy.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 National Inter-Communication Systems, Inc., 1130 N. Milwaukee Ave., Chicago 22, Ill.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.

PUMPS—Metering

Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
 Hinkley Technical Associates, Inc., 75 Orchard St., Belmont 78, Mass.
 LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
 ROBINSON INC., EDWARD E., 95 Park Ave., Nutley 10, N. J. ADV. PG. 502.

PUMPS—Vacuum

See Vacuum Pumps

PUSHBUTTONS

ALDEN PRODUCTS CO., 112 N. Main St., Brockton, Mass. ADV. PG. 204, 205.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City, N. Y.
 Carling Electric, Inc., 499 Park Ave., West Hartford 10, Conn.
 Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
 ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio.
 ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 426.
 Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Trumbull Electric Dept. of General Electric Co., Plainville, Conn.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

QUARTZ

See Crystals

RACKS, AGING—Vacuum Tube

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 568.
 Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Sorensen Industrial Electronic Co., 87 N. Day St., Orange, N. J.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

RACKS—Relay

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 BURROUGHS CORP., Electronic Instruments Div., 511 N. Broad St., Philadelphia 23, Pa. ADV. PG. 211-214.
 CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 446.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Corry Jamestown Mfg. Co., Corry, Pa.
 Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.
 FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Gates Radio Co., Quincy, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio.
 PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 160.
 PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 592.
 REF Manufacturing Corp., Jericho Turnpike, Mineola, N. Y.
 Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
 WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 262.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

RADAR SYSTEMS

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 American Electron Engineering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 ECLIPSE PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
 Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif. 2-5.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif. 1-2-3-4-5-6.
 McColepin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif. 2-5-6.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif. 1-2-6.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. 1-2. ADV. PG. 328.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. 1-2-5-6. ADV. PG. 437.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif. 5.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 2-6.
 Manson Laboratories, 207 Greenwich Ave., Stamford, Conn. 1-2-3-5-6.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. 5.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada. 5-6.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. 1-2-3-4-5-6. ADV. PG. 127.
 Milten Mfg. Co., James, 150 Exchange St., Malden, Mass. 3.
MODEL RECTIFIER CORP., 557 Roggers Ave., Brooklyn 25, N. Y. 2-5-6. ADV. PG. 536.
 Moulic Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill. 1-2-5-6.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England. 3.
Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich. 1-2.
 National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland 3, Ohio. 1-2-3-5-6.
NEUTRONIC ASSOCIATES, 83-56 Victor Ave., Elmhurst, N. Y. 2-3-4-5-6. ADV. PG. 500.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y. 2.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio. 2.
 Northeastern Engineering Inc., Manchester, N. H. 1-2-3-4-5-6.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa. 2-3-5.
 Nucleonic Company of America, 497 Union St., Brooklyn 31, N. Y. 3-5-6.
OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. 2-5-6. ADV. PG. 479.
 Oregon Electronic Mfg. Co., 2232 E. Burnside St., Portland 15, Ore. 2-5-6.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. 1-2-5. ADV. PG. 569.
 Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif. 5.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. 2-3-5-6. ADV. PG. 285.
PERKIN ENGINEERING CORP., 345 Kansas St., El Segundo, Calif. 2-3-5-6. ADV. PG. 604.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. 1-2-3-5-6. ADV. PG. 614.
 Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass. 2-5.
 Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y. 3.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill. 5.
 Plastic Capacitors, Inc., 2511 W. Moffat St., Chicago 47, Ill. 2-3-6.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. 5. ADV. PG. 108, 109.
 Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich. 5.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. 3. ADV. PG. 502.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. 5.
 Pulse Techniques, Inc., 1411 Palisade Ave., West Englewood, N. J. 6.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill. 2-3-5-6.
 Rangertone, Inc., 73 Winthrop St., Newark 4, N. J. 1.
RAPID ELECTRIC CO., 2881 Middletown Rd., New York, N. Y. 2. ADV. PG. 628.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. 2-5. ADV. PG. 420.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. 1-2-5. ADV. PG. 134.
 Resdel Engineering, 2351 Riverside, Los Angeles 39, Calif. 1-2-3-4-5-6.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio. 3.
 "S" Corrugated Quenched Gap Co., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J. 3.
 Schauer Manufacturing Corp., 4521 Alpine Ave., Cincinnati 36, Ohio. 2-5.
 Scientific Specialties Corp., Snow & Union Sts., Brighton 35, Mass. 2-3-5.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass. 2.
 Senn Corp., New Augusta, Ind. 2-3.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. 1-2. ADV. PG. 426.
SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, Ill. 1-5-6. ADV. PG. 536.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 1-2-3-5-6. ADV. PG. 62, 63.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. 1-2-3-5-6.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. 1-2-3-5-6. ADV. PG. 430, 431.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. 3. ADV. PG. 476.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. 4. ADV. PG. 283, 284.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J. 1-2-3-5-6.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 3-5.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J. 1-2-3.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. 1-2-3-5-6.
SUPERIOR ELECTRIC CO., THE, 4000 Mae Ave., Bristol, Conn. 1-2. ADV. PG. 192, 193.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. 2-5.
TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East Rutherford, N. J. 2-5. ADV. PG. 623.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. 2-3-5-6. ADV. PG. 562.
 Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif. 2-5-6.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. 1-2-5-6. ADV. PG. 287.
 Thompson Products, Inc., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio. 5.
 Thordarson-Meissner Mfg. Divs., 500 W. Huron St., Chicago 10, Ill. 3-5.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. 1-2-5-6. ADV. PG. 234.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y. 1-2-3-4-5-6.
UNIVERSAL ELECTRONICS CO., 2012 S. Sepulveda Blvd., Los Angeles 25, Calif. 2-5-6. ADV. PG. 606.
 Utting Associates, George, 290 Centre St., Newton 58, Mass. 3.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. 4-5. ADV. PG. 392, 393.
VECTRON, INC., 404 Main St., Waltham 54, Mass. 4-5. ADV. PG. 457.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. 2-5. ADV. PG. 376.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. 2-3-5. ADV. PG. 206, 207.
 Video Corp. of America, 229 W. 28th St., New York 1, N. Y. 2-3-4-5-6.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind. 1-2-5.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich. 1-2-3.
WAVELINE, INC., Box 470, Caldwell, N. J. 4. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass. 4-5-6.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 4.
 Wurflitzer Co., Rudolph, North Tonawanda, N. Y. 1-2.

PRE-AMPLIFIERS for COMMUNICATION RECEIVERS

Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
CONDENSER PRODUCTS CO., 7517 N. Clark St., Chicago 26, Ill. ADV. PG. 273.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.
 Espy Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
LANGEVIN MFG. CORP., 37 W. 65 St., New York 23, N. Y. ADV. PG. 360.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Northeastern Engineering Inc., Manchester, N. H.
 Radio Mfg. Engineers Inc., 300-302 First Ave., Peoria 6, Ill.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
 Wurflitzer Co., Rudolph, North Tonawanda, N. Y.

PRE-AMPLIFIERS for OSCILLOSCOPES

Airmec Laboratories, Ltd., Nigh Wycombe, Buckinghamshire, England.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Commercial Research Labs., Inc., 20 Bartlett Ave., Detroit 3, Mich.
CONDENSER PRODUCTS CO., 7517 N. Clark St., Chicago 26, Ill. ADV. PG. 273.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
 Ellis Associates, Box 77, Pelham 65, N. Y.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Furst Electronics, 3322 W. Lawrence Ave., Chicago 2, Ill.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 10, Calif.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 72.
LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 624.
 Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 2, N. Y.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.
 Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 623.
 Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Yellow Springs Instrument Co., Inc., P. O. Box 10, Yellow Springs, Ohio.

PRE-SELECTORS

AIR ASSOCIATES INC., Teterboro, N. J. ADV. PG. 329.
 Electro-Voice, Inc., Buchanan, Mich.

PRESSES—Metal Forming

Acromark Co., 9-13 Gorrell St., Elizabeth 4, N. J.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Oklahoma City 9, Okla. ADV. PG. 617.
 Shore Engineering Inc., 232 West Ave., Long Branch, N. J.

PRESSURE

See Controls

PRINTED, STAMPED or ETCHED CIRCUITS

See Circuits

PROBES

See also Lines—Slotted

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 621.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 DuMont Laboratories, Inc., Allen B., Instrument Division, 760 Bloomfield Ave., Clifton, N. J.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 3, Pa.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Hastings Instrument Co., Inc., Hampton 9, Va.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Javex, P. O. Box 646, Redlands, Calif.
JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. ADV. PG. 18, 190.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 1, Mass.
 Leighton Labs., H. W., 26 Herman St., Glen Ridge, N. J.
LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 624.
MILLIVAC INSTRUMENT CORP., 444 Second St., Bridgeport, N. Y. ADV. PG. 611.
 Pacific Electronic Co., P. O. Box 15805, Cranshaw Station, Los Angeles 8, Calif.
 Scala Radio Co., 2814 19th St., San Francisco 1, Calif.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
 Television Equipment Corp., 52 Broadway, New York 4, N. Y.
 United Technical Labs., Box 425-V, Morristown, N. J.

PROBES—High Frequency

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Javex, P. O. Box 646, Redlands, Calif.
 JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. ADV. PG. 188-190.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 624.
 MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
 Oregon Electronic Mfg. Co., 2232 E. Burnside St., Portland 15, Ore.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 United Technical Labs., Box 425-V, Morristown, N. J.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.

PROBES—High Voltage

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Industrial Transformer Co., Gouldsboro, Pa.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Javex, P. O. Box 646, Redlands, Calif.
 JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. ADV. PG. 188-190.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 624.
 PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
 Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 430, 431.

PROBES—Microwave

See Microwave Accessories

PROJECTION TUBES

See Tubes, Television Projection

PROTECTIVE SEALERS

See Insulating Compounds

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PSYCHO GALVANOMETERS

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.

PUBLIC ADDRESS SYSTEMS

See also Sound Systems, Complete

ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, Ill. ADV. PG. 542.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
 Audio-Master Corp., 341 Madison Ave., New York 17, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
 Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.
 Dilks Co., The, Seymour, Conn.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 EL-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Elex Co., 69-19 215th St., Bayside, N. Y.
 Executone, Inc., 415 Lexington Ave., New York 17, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 GALBRAITH & SON ELECTRIC CORP., C. C., 450 Avenue of the Americas, New York 11, N. Y. ADV. PG. 542.
 Gates Radio Co., Quincy, Ill.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 Lesa, Via Bergamo 21, Milan, Italy.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 National Inter-Communication Systems, Inc., 1130 N. Milwaukee Ave., Chicago 22, Ill.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.

PUMPS—Metering

Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
 Hinkley Technical Associates, Inc., 75 Orchard St., Belmont 78, Mass.
 LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
 ROBINSON INC., EDWARD E., 95 Park Ave., Nutley 10, N. J. ADV. PG. 502.

PUMPS—Vacuum

See Vacuum Pumps

PUSHBUTTONS

ALDEN PRODUCTS CO., 112 N. Main St., Brockton, Mass. ADV. PG. 204, 205.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City, N. Y.
 Carling Electric, Inc., 499 Park Ave., West Hartford 10, Conn.
 Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
 ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 426.
 Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Trumbull Electric Dept. of General Electric Co., Plainville, Conn.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

QUARTZ

See Crystals

RACKS, AGING—Vacuum Tube

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 568.
 Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Sorensen Industrial Electronic Co., 87 N. Day St., Orange, N. J.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

RACKS—Relay

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 ART-LOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 414.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 BURROUGHS CORP., Electronic Instruments Div., 511 N. Broad St., Philadelphia 23, Pa. ADV. PG. 211-214.
 CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 446.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Corry Jamestown Mfg. Co., Corry, Pa.
 Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.
 FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Gates Radio Co., Quincy, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 160.
 PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 592.
 REF Manufacturing Corp., Jericho Turnpike, Mineola, N. Y.
 Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
 WALTER CO., INC., S., 1400 Atlantic Ave., Brooklyn 16, N. Y. ADV. PG. 262.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

RADAR SYSTEMS

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 ECLIPSE PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
 Gillilan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.
 Leru Laboratories, Inc., 490 Black Oak Ridge Rd., R. D. 4, Paterson, N. J.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
MAXSON CORP., W. L., 460 W. 34th St., New York 34, N. Y. ADV. PG. 144.
 Missouri Research Labs., 2109 Locust St., St. Louis 39, Mo.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.

RADAR SYSTEMS AND EQUIPMENT—Trainers

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Gilfillan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
MAXSON CORP., W. L., 460 W. 34th St., New York 34, N. Y. ADV. PG. 144.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

RADIOSONDES

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Northeastern Engineering, Inc., Manchester, N. H.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
U. S. ELECTRONIC CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.

RADOMES

Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 Keller Products Co., 41 Union St., Manchester, N. H.
 U. S. Plywood Corp., Electrical Structures Dept., 55 W. 44th St., New York 17, N. Y.
 Zenith Plastic Co., Gardena, Calif.

RATIOMETERS

See Instruments—Electrical Measuring

REACTORS

See also Chokes and Inductances, Choke

REACTORS—Saturable

Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. ADV. PG. 238.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 584.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. ADV. PG. 360.

ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 558.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455.
 Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Geotronic Labs., Inc., Dallas 11, Texas.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 618.
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda, Md.
 K-V Transformer Corp., Danbury, Conn.
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
MAGNETICS, INC., Box 230-E, Butler, Pa. ADV. PG. 561.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
 Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
 Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
 Sclaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 62, 63.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 376.

RECEIVERS—Aircraft

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 168.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Eckstein Radio & Television Co., 3400 E. 42nd St., Minneapolis 6, Minn.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 Northeastern Engineering, Inc., Manchester, N. H.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 234.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.

RECEIVERS—a-m Fixed Frequency

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 American Electroengineering Corp., 2040 Colorado Ave., Santa Monica, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
DOLLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 591.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City 1, N. Y.
 Espy Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.
 Heintz & Kaufman Equipment Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Schuttig & Co., Inc., 9th & Kearny Sts., N.E., Washington 17, D. C.
 Specific Products, 5864 Hollywood Blvd., Hollywood 28, Calif.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.

RECEIVERS—a-m/f-m Communication

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
 Electro-Voice, Inc., Buchanan, Mich.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City 1, N. Y.
 Espy Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
FEDERAL MFG. & ENGINEERING CORP., 211 Steubenville St., Brooklyn 5, N. Y. ADV. PG. 415.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 164-167.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 415.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 164-167.
 Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Northeastern Engineering Inc., Manchester, N. H.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
 Radio Mfg. Engineers, Inc., 300-302 First Ave., Peoria 6, Ill.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stockman Electronics Research Co., 543 Lexington St., Waltham 54, Mass.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.
 Heintz & Kaufman Equipment Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
 Hycon Mfg.-Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Measurement Engineering Ltd., Arnprior, Ontario, Canada.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 Schuttig & Co., Inc., Ninth & Kearny Sts., N.E., Washington 17, D. C.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Specific Products, 5864 Hollywood Blvd., Hollywood 28, Calif.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W.C. 2, England.
 Technical Materiel Corp., The, P. O. Box 142, Mamaroneck, N. Y.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

RECEIVERS—Automatic Radio Alarm

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Breco Electronics Corp., 55 Vandam St., New York 13, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

RECEIVERS—Automobile

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Eckstein Radio & Television Co., 3400 E. 42nd St., Minneapolis 6, Minn.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 Northeastern Engineering Inc., Manchester, N. H.
 Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
 Sylvania Electric Products, Inc., Radio & Television Div., 254 Rano St., Buffalo 7, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

RECEIVERS—Coin Operated

Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 Coradio, Inc., 196 Albion Ave., Paterson, N. J.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Northeastern Engineering Inc., Manchester, N. H.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 569.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 234.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

RECEIVERS—Communication and Amateur

Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
CROSBY LABS., INC., Robbins Lane, Box 233, Hicksville, N. Y. ADV. PG. 84.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.

RECEIVERS—Diversity Reception

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
CROSBY LABS., INC., Robbins Lane, Box 233, Hicksville, N. Y. ADV. PG. 84.
DOLLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 591.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 164-167.
 Heintz & Kaufman Equipment Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
 Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 196-198.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Technical Materiel Corp., The, P. O. Box 142, Mamaroneck, N. Y.

RECEIVERS—Fixed Frequency

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
DOLLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 591.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.

RECEIVERS—f-m

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
 Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 3, N. Y.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y. Ind.

RECEIVERS—Loran

Bludworth Marine Div., National-Simplex-Bludworth Inc., 92 Gold St., New York 38, N. Y.
 Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

RECEIVERS—Marine

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
 Gray Radio Co., 501 Forest Hill Blvd., West Palm Beach, Fla.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lysco Mfg. Co., 82 Herman St., East Rutherford, N. J.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Northeastern Engineering Inc., Manchester, N. H.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Pacific Mercury Television Mfg. Corp., 14500 Aetna St., Van Nuys, Calif.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 National Electronics Laboratories, Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
 Pacific Mercury Television Mfg. Corp., 14500 Aetna St., Van Nuys, Calif.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Schuttig & Co., Inc., Ninth & Kearney Sts., N. E., Washington 17, D. C.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

RECEIVERS—Microwave

See Microwave Accessories

RECEIVERS—Panoramic

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.

RECEIVERS—Portable & Mobile

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
 National Electronics Laboratories, Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Symphony Radio & TV Co., 925 South Western Ave., Los Angeles 6, Calif.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

RECEIVERS—Radio Direction Finder

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City, N. Y.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
 Fisher Research Lab., 1961 University Ave., Palo Alto, Calif.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.

RECEIVERS—Railroad

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

RECEIVERS—uhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Motorola, Inc., 4545 Augusta Blvd., Chicago 51, Ill.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
 Resdel Engineering, 2351 Riverside, Los Angeles 39, Calif.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stockman Electronics Research Co., 543 Lexington St., Waltham 54, Mass.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.

RECEIVERS—vhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Condor Radio Mfg. Co., 2705 S. Kramer Ave., Tucson, Ariz.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.

RECEIVERS—Home

1. a-m Clock Radio
 2. a-m phono Console
 3. a-m phono Table
 4. a-m Console
 5. a-m Portable
 6. a-m Table
 7. a-m Vest Pocket
 8. a-m/f-m phono, Console
 9. a-m/f-m phono, Table
 10. a-m/f-m Console
 11. a-m/f-m Portable
 12. a-m/f-m Table
 13. f-m Console
 14. f-m Portable
 15. f-m Table
 16. t-v Console
 17. t-v Portable
 18. t-v Table
 19. f-m/t-v Console
 20. a-m/f-m/t-v Console
 21. a-m/f-m/t-v Table
 22. a-m/f-m/t-v phono, Console
 23. Recorder and Phonograph Combination
 24. Built-in Wall Type
- Admiral Corp., 3800 Cortland St., Chicago, Ill. 2-3-5-6-8-16-18-20-22.
 Andrea Radio Corp., 27-01 Bridge Plaza North, Long Island City 1, N. Y. 5.
 Ansley Mfg. Co., Arthur, Doylestown, Pa. 8-11-12-24.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y. 12.
 Arvin Industries, Radio & Television Div., Columbus, Ind. 1-5-6-12-16-18.
 Audar, Inc., P. O. Box 438 M, Pasadena 18, Calif. 1-2-3-6.
 Audio Industries, Inc., Michigan City, Ind. 3.
 Audio-Master Corp., 341 Madison Ave., New York 17, N. Y. 3.
 Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass. 1-3-5-6-16-17-18.
 Bace Television Corp., Green & Leuning Sts., South Hackensack, N. J. 16-18.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y. 24.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif. 6-15-18-22.
 Canadian Aviation Electronics, Ltd., 8280 St. Lawrence St., Montreal 14, P.Q., Canada. 16-18.
 Capehart-Farnsworth Corp., 3700 E. Pontiac, Fort Wayne 1, Ind. 1-2-5-6-8-16-18-22.
 Conrac, Inc., Glendora, Calif. 16-24.
 Crosley Division, Avco Mfg. Co., 1329 Arlington St., Cincinnati 25, Ohio. 1-5-6-12-16-18-22.
 DuMont Laboratories, Inc., Allen B., Television Receiver Div., 35 Market St., East Paterson, N. J. 16-18-20-22.
 Eckstein Radio & Television Co., 3400 E. 42nd St., Minneapolis 6, Minn. 1-3-6.
 Elec Co., 69-19 215th St., Bayside, N. Y. 3-5-6.
 Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn, Ill. 5.
 Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. 24.

Esquire Radio Corp., 26 Court St., Brooklyn 2, N. Y. 1-3-6.
 Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J. 1-2-3-5-6-8-9-16-18.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. 23.
 Fisher Radio Corp., 41 E. 47th St., New York, N. Y. 8-10.
 Flush Wall Radio Co., 1012 Cleveland St., Clearwater, Fla. 24.
 Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y. 1-2-3-5-7-8-16-18-19-20-21-22-23.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. 1-5-6-12-16-18. ADV. PG. 1-18.
 Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill. 16-18-22.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y. 2-3-4-6-8-9-10-12-13-15-25.
HEATH CO., Benton Harbor, Mich. 6. ADV. PG. 486.
 Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif. 2-3-8-16-18-20-22.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif. 16.
 International Television Corp., 238 William St., New York 38, N. Y. 16-17-18.
 Kaye-Halberf Corp., 3555 Hayden Ave., Culver City, Calif. 16-18-22.
 Laurehk Radio Mfg. Co., 3931 Monroe Ave., Wayne, Mich. 7.
 Lesa, Via Bergamo 21, Milan, Italy. 5-23.
 MP Engineering Co., Fairfield 3, Conn. 7-8-16-22-23.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif. 6-23-24.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. 2-8-10-19-20-21-22-24. ADV. PG. 328.
 Mattison Television & Radio Corp., 10 W. 181st St., New York 53, N. Y. 3-6-9-16-18-19-20-21-22.
 Meck TV, Inc., 1020 Rush St., Chicago 11, Ill. 8-16-18-22.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. 24.
 Midwest Radio & Television Corp., 909 Broadway, Cincinnati 2, Ohio. 8-10-12-16-18.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 6.
 Motorola, Inc., Consumer Div., 4545 Augusta Blvd., Chicago 51, Ill. 1-2-4-5-6-8-10-16-18-20-22.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England. 5-6.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. 6. ADV. PG. 232, 233.
 National Electronics Mfg. Co., 314 W. 58th St., Los Angeles, Calif. 16-18-20-22.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif. 6.
 Olympic Radio & Television Co., 34-01 38th Ave., Long Island City, N. Y. 5-6-8-16-18-20-22.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. 1-2-3-4-5-8-9-24. ADV. PG. 569.
 Pacific Mercury Television Mfg. Corp., 14500 Aetna St., Van Nuys, Calif. 4-6-8-9-10-11-16-18.
 Packard-Bell Co., 12333 W. Olympic Blvd., Los Angeles 64, Calif. 1-6-16-18-22.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill. 3-5-23.
 Philco Corp., C & Tiona Sts., Philadelphia 34, Pa. 1-2-3-5-6-8-12-16-18-22.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y. 6.
 Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y. 18-19-20.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. 7. ADV. PG. 566.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill. 24.
 Prescott Television Co., 7350 Beverly Blvd., Los Angeles 36, Calif. 16-18-20-22.
 Radio Corp. of America, Home Instrument Dept., Camden, N. J. 1-2-3-5-7-8-12-16-19-22.
 Radio Craftsmen, Inc., 4401 N. Ravenswood Ave., Chicago 40, Ill. 18-24.
 Raytheon Television & Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill. 1-5-6-12-16-18-20-22.
 Sentinel Radio Corp., 2100 Demoster St., Evanston, Ill. 5-6-7-8-9-10-12-15-17-18-20-21-22.
 Setchell Carlson, Inc., 330 Fifth Ave., New Brighton, Minn. 5-16-18-20-23.
 Sheraton Television Corp., 200 River St., Red Bank, N. J. 16-18.
 Shevers, Inc., Harold, 123 W. 64th St., New York 23, N. Y. 16-17-18.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 2-3-4-23.
 Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago 14, Ill. 1-5-6-12-16-18.
 Stockman Electronics Research Co., 543 Lexington St., Waltham 54, Mass. 5.
 Stromberg-Carlson Co., Rochester 3, N. Y. 10-16-18-20-22.
 Sylvia Electric Products, Inc., Radio & Television Div., 254 Rano St., Buffalo 7, N. Y. 1-2-5-6-8-16-18-22.
 Symphonic Radio & Electronics Corp., 160 Washington St., Boston 14, Mass. 2-3.
 Symphony Radio & TV Co., 925 S. Western Ave., Los Angeles 6, Calif. 1-5-6-11-12.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y. 2-3-5-6-18.
 Teleguio Radio Co., 2559 W. 21st St., Chicago 8, Ill. 16-18.

Thordarson-Meissner Mfg. Divs., 500 W. Huron St., Chicago 10, Ill. 2-3-4-5-6-8-9-10-11-12-13-18.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. 1-16. ADV. PG. 234.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y. 16-18-19-24.
 Trav-Ler Radio Corp., 571 W. Jackson Blvd., Chicago, Ill. 3-5-6-16-18-22.
 Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y. 16-17-19-20-22.
 Video Corp. of America, 229 W. 28th St., New York 1, N. Y. 1-6.
 Video Products Corp., 42 West St., Red Bank, N. J. 16-18.
 Weingarten Electronic Labs, Inc., 7556 Milrose Ave., Los Angeles 46, Calif. 8-20-22-24.
 Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, Ill. 2-6-8-12-16-18.
 White Rock Mfg. Corp., White Rock, S. C. 2-3-6.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y. 1-2-3-5-7-8-16-18-19-20-21-22-23.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y. 1.
 Zenith Radio Corp., 6001 Dickens Ave., Chicago 39, Ill. 4-5-6-8-12-14-15-16-18-20-22.

RECEIVING EQUIPMENT—vhf Omni-Range
AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 168.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
LAOVOE LABORATORIES, Morganville, N. J. ADV. PG. 419.
 Lear Inc., 110 Ionia Ave., N. W., Grand Rapids 2, Mich.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
SERVO CORP OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.

RECORDERS—Blood Pressure, Electronic
 Alleghany Instrument Co., Inc., Cumberland, Md.
BRISTOL ENGINEERING CORP., Lincoln Ave. and Pond St., Bristol 1, Pa. ADV. PG. 547.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Photon Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
 Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.

RECORDERS—Density
 See **Recorders, Specific Gravity**

RECORDERS—Electronic Office Recorders & Playbacks
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
 Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
 Edison, Inc., Thomas A., Ediphone Div., 51 Lakeside Ave., West Orange, N. J.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MAGNECORD, INC., 225 W. Ohio St., Chicago 10, Ill. ADV. PG. 536.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Ill.
 Pentron Corp., The, 221 E. Cullerton St., Chicago 16, Ill.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 Product Associates, Inc., 318 W. Olympic Blvd., Los Angeles, Calif.
 SoundScriber Corp., 146 Munson St., New Haven 4, Conn.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.

RECORDERS—Electronic Rotary Stylus
MOSELEY, FRANCIS L., 1325 N. Fair Oaks, Pasadena 3, Calif. ADV. PG. 544.

RECORDERS—Electronic Self-Balancing Recorders and Indicators
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Barnes Development Co., Lansdowne, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. ADV. PG. 157.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Librascope, Inc., 1607 Flower St., Glendale 1, Calif.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 426.

RECORDERS—Facsimile
 Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
ALDEN ELECTRONIC & IMPULSE RECORDING EQUIPMENT CO., Box 125, Westboro, Mass. ADV. PG. 619.
 Alden Systems, Inc., Alden Research Center, Westboro, Mass.
AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 94, 95.
 Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 384.

RECORDERS—Film
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Fairchild Recording Equipment Co., 154th St. & 7th Ave., Whitestone, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Kinevox Corp., 116 S. Hollywood Way, Burbank, Calif.
 Magnasyn Mfg. Co., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Maurer Inc., J. A., 37-01 31st St., Long Island City, N. Y.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

RECORDERS—Film Thickness
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Foxboro Co., The, Foxboro, Mass.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.

RECORDERS—Fluid Conductivity, Electronic
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bristol Co., The, Waterbury 20, Conn.
 Foxboro Co., The, Foxboro, Mass.
 Industrial Instruments Inc., 89 Commerce Rd., Cedar Grove, N. J.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

RECORDERS—Fluid Flow, Electronic
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Fischer & Porter Co., 476 Warminster Rd., Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.

RECORDERS—Frequency

See Instruments—Electrical Measuring

RECORDERS—Humidity, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

RECORDERS—Liquid Level, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Bristol Co., The, Waterbury 20, Conn.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Fischer & Porter Co., 476 Warminster Rd., Hatboro, Pa.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.

RECORDERS—Materials Thickness, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Foxboro Co., The, Foxboro, Mass.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.

RECORDERS—Mechanical

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Cyclotron Specialties Co., Moraga 8, Calif.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 General Mills, Inc., Mechanical Div., 1620 Central Ave., Minneapolis 13, Minn.
 Gorrell & Gorrell, Haworth, N. J.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Streeter-Ames Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.

RECORDERS—Moisture, Electronic

Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

RECORDERS—Oxygen

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

RECORDERS—pH

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Foxboro Co., The, Foxboro, Mass.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.

RECORDERS—Power Level

See Instruments—Electrical Measuring

RECORDERS—Potentiometer

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Barnes Development Co., Lansdowne, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 426.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

RECORDERS—Pressure, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Bristol Co., The, Waterbury 20, Conn.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
MAGNAVOX CO., THE, Components Div. Fort Wayne 4, Ind. ADV. PG. 328.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 514.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

RECORDERS—Smoke and Combustion, Electronic

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.

RECORDERS—Sound Level

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.

Sound Apparatus Co., Sterling, N. J.
 SoundScriber Corp., 146 Munson St., New Haven 4, Conn.
 Stancil-Hoffman Corp., 1016 N. Hollywood Ave., Hollywood 38, Calif.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 V-M Corp., Benton Harbor, Mich.

RECORDERS—Sound and Phonograph

AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 94, 95.
 Audak Co., 500 Fifth Ave., New York, N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
 Carron Mfg. Co., 15 S. Aberdeen St., Chicago, Ill.
 Cook Laboratories, R-2, Stamford, Conn.
 Fairchild Recording Equipment Co., 154 St. & 7th Ave., Whitestone, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 General Industries Co., Taylor & Olive St., Elyria, Ohio.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Magnasync Mfg. Co., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 271.
 Q. R. K. Electronic Products, 445 N. Circle Drive, Fresno 4, Calif.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Rek-O-Kut Co., Inc., 38-03A Queens Blvd., Long Island City, N. Y.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
 United Pressed Products Co., 741 W. Harrison St., Chicago 7, Ill.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

RECORDERS—Specific Gravity, Electronic

Bristol Co., The, Waterbury 20, Conn.
 Foxboro Co., The, Foxboro, Mass.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

RECORDERS—Strain

Allegany Instrument Co., Inc., Cumberland, Md.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
 Foxboro Co., The, Foxboro, Mass.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 552.
 Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.
 Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

RECORDERS—Tape

1. Cellophane Tape
2. Magnetic Tape

AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. 2. ADV. PG. 94, 95.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. 2. ADV. PG. 360.
 Ampro Corp., 2835 North Western Ave., Chicago 18, Ill.
 Audio-Master Corp., 341 Madison Ave., New York 17, N. Y. 2.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio. 2.
 Berlant Associates, 4917 W. Jefferson Blvd., Los Angeles 16, Calif. 2.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 2.
 British Industries Corp., 164 Duane St., New York 13, N. Y. 2.
 Broadcast Equipment Specialties Corp., 135-01 Liberty Ave., Richmond Hill 19, N. Y. 2.

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. 2. ADV. PG. 374, 375.
 Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif. 2.
 Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y. 2.
 Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif. 2.
 Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill. 2.
 Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill. 1-2.
 Crestwood Recorder Div., Daystrom Electric Corp., 221 N. LaSalle, Chicago 1, Ill. 2.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. 2. ADV. PG. 522.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill. 2.
 Ectro, Inc., Delaware, Ohio. 2.
 EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. 2. ADV. PG. 120.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn. 2.
 Fatchild Recording Equipment Co., 154th St. & 7th Ave., Whitestone, N. Y. 2.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill. 2.
 Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y. 1-2.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. 2.
 General Industries Co., Taylor & Olive Sts., Elyria, Ohio. 2.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J. 2.
 Kinevox Corp., 116 S. Hollywood Way, Burbank, Calif. 2.
 Land-Air, Inc., 440 W. Superior St., Chicago 10, Ill. 2.
 Magnasync Mfg. Co., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif. 2.
 MAGNECORD, INC., 225 W. Ohio St., Chicago 10, Ill. 2. ADV. PG. 536.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. 2.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. 1.
 Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Ill. 2.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill. 2.
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. 2. ADV. PG. 516.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y. 2.
 PRESTO RECORDING CORP., Paramus, N. J. 2. ADV. PG. 271.
 RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. 2. ADV. PG. 295, Inside Back & Back Covers.
 Rangertone, Inc., 73 Winthrop St., Newark 4, N. J. 2.
 Recoton Corp., 147 W. 22nd St., New York 11, N. Y. 2.
 Revere Camera Co., 320 E. 21st St., Chicago 16, Ill.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. 2.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y. 2.
 SoundScriber Corp., 146 Munson St., New Haven 4, Conn. 2.
 Speak-O-Phone Recording & Equip. Co., 23 W. 60th St., New York, N. Y. 2.
 Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif. 2.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y. 2.
 Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill. 2.
 Webster Electric Co., 1900 Clark St., Racine, Wis. 2.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y. 1-2.

RECORDERS—Telemetering

See Instruments—Electrical Measuring

RECORDERS—Telephone Recording Equipment

ALDEN ELECTRONIC & IMPULSE RECORDING EQUIPMENT CO., Box 125, Westboro, Mass. ADV. PG. 619.
 CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Brittainia St., Meriden, Conn. ADV. PG. 590.
 Gorrell & Gorrell, Haworth, N. J.
 Magnasync Mfg. Co., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Ill.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 SoundScriber Corp., 146 Munson St., New Haven 4, Conn.

RECORDERS—Temperature, Electronic

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
 Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.
 BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.

Bristol Co., The, Waterbury 20, Conn.
 BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Little, Inc., Arthur D., Cambridge, Mass.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.

RECORDERS—Timing

ALDEN ELECTRONIC & IMPULSE RECORDING EQUIPMENT CO., Box 125, Westboro, Mass. ADV. PG. 619.
 Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.
 Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Cyclotron Specialties Co., Moraga 8, Calif.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Gorrell & Gorrell, Haworth, N. J.
 HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. ADV. PG. 208, 209.
 Magnasync Mfg. Co., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.

RECORDERS—Torque, Electronic

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
 SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.

RECORDERS—Vacuum

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Foxboro Co., The, Foxboro, Mass.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.

RECORDERS—Weight, Electronic

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Foxboro Co., The, Foxboro, Mass.
 Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
 Ruge-de Forest Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
 SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

RECORDERS—Wire

Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
 Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn, Ill.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Land-Air, Inc., 440 W. Superior St., Chicago 10, Ill.
 Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
 Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Ill.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.

RECORDING HEADS

See Heads, Recording

RECORDING TAPE

See Tape (for Recording)

RECORDING WIRE

See Wire (for Recording)

RECORDS—Phonograph

Cook Laboratories, R-2, Stamford, Conn.
 Decca Records, Inc., 50 West 57th St., New York 19, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Radio Corp. of America, Record Dept., New York, N. Y.
 Zephyr Products Co., 129 E. 124th St., New York 35, N. Y.

RECTIFIERS—Copper Oxide, Copper Sulphide

See Rectifiers—Metallic

RECTIFIERS

1. Germanium
2. Metallic Oxide
3. Selenium
4. Tube

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y. 2-3.
 Barry Electronics Corp., 136 Liberty St., New York 6, N. Y. 3.
 Bart-Messing Corp., 227 Main St., Belleville 9, N. J. 3.
 BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. 1-3. ADV. PG. 562.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Patterson 3, N. J. 3.
 Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 3.
 Bowers Battery & Spark Plug Co., Reading, Pa. 3-4.
 BRADLEY LABS., INC., 82 Meadow St., New Haven 10, Conn. 2-3. ADV. PG. 170.
 British Industries Corp., 164 Duane St., New York 13, N. Y. 3.
 Clark Electronic Labs., Box 165, Palm Springs, Calif. 2-3-4.
 Conant Labs, 6500 O St., Lincoln 5, Neb. 2-3.
 EITEL-MCCULLOUGH, INC., San Bruno, Calif. 4. ADV. PG. 378, 379.
 Electricoil Transformer Co., Westerly Rd., Ossining, N. Y. 3.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill. 1.
 Electronic Devices, Inc., Precision Rectifier Div., 429 12th St., Brooklyn, N. Y. 3.
 FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. 3. ADV. PG. 116.
 FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 1-3-4. ADV. PG. 148-153.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-2-3-4. ADV. PG. 1-18.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. 1. ADV. PG. 1-18.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. 4. ADV. PG. 1-18.
 GOOD-ALL ELECTRIC MFG. CO., 112 W. First St., Ogallala, Neb. 3. ADV. PG. 588.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif. 3.
 INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave., El Segundo, Calif. 1-3. ADV. PG. 499.
 INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. 3. ADV. PG. 175-178.
 Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass. 1-4.
 KOTRON RECTIFIER CORP., 175 Murray St., Newark N. J. 3. ADV. PG. 585.
 LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. 4. ADV. PG. 573.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif. 3.
 LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. 3. ADV. PG. 481.
 McCoolpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif. 3-4.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 2-3.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. 4.
 MODEL RECTIFIER CORP., 557 Rogers Ave., Brooklyn 25, N. Y. 3. ADV. PG. 536.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England. 4.
 OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. 3. ADV. PG. 479.
 PERKIN ENGINEERING CORP., 345 Kansas St., El Segundo, Calif. 3. ADV. PG. 604.

RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. 1-3. ADV. PG. 434, 435.
RAPID ELECTRIC CO., 2881 Middletown Rd., New York, N. Y. 3. ADV. PG. 628.
Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass. 1-4.
Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif. 2-3-4.
Sanford Miller Co., 373 S. 2nd St., Brooklyn 11, N. Y. 3.
SARKES TARJIAN INC., 539 S. Walnut, Bloomington, Ind. 3. ADV. PG. 276.
Schauer Manufacturing Corp., 4521 Alpine Ave., Cincinnati 36, Ohio. 2-3.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England. 1-3-4.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-3-4. ADV. PG. 654-660.
Syntron Corp., 243 Lexington, Homer City, Pa. 3.
Ther Electric & Machine Works, 17 S. Jefferson St., Chicago, Ill. 2-3-4.
Transitron Electronic Corp., 403-407 Main St., Melrose 76, Mass. 1.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y. 4.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. 3. ADV. PG. 376.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. 3. ADV. PG. 45-55, 60.

RECTIFIERS—Tube Rectifying Units

Clark Electronic Labs., Box 165 Palm Springs, Calif.
Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.
LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. ADV. PG. 573.
MAGNATRON, INC., 248 Schuyler Ave., Kearny, N. J. ADV. PG. 501.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.
PERKIN ENGINEERING CORP., 345 Kansas St., El Segundo, Calif. ADV. PG. 604.
PESCHLE ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 614.
Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich.
Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 62, 63.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

REGULATORS—Current

AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 258.
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 220.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
Industrial Transformer Co., Gouldsboro, Pa.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
KEPCO LABS, INC., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 25-27.
Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 62, 63.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

REGULATORS—Frequency

Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Burlington Instrument Co., Burlington, Iowa.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 220.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
Industrial Transformer Co., Gouldsboro, Pa.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 62, 63.

REGULATORS—Voltage Regulators and Stabilizers

ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. ADV. PG. 453.
AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 258.
Associated Engineering Corp. of Boston, 38 Euston Rd., Brighton 35, Mass.
Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Burlington Instrument Co., Burlington, Iowa.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
Clark Electronic Labs., Box 165, Palm Springs, Calif.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 132, 133.
Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 220.
El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 251.
Industrial Transformer Co., Gouldsboro, Pa.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Jack & Heintz, Inc., Cleveland 1, Ohio.
Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
KALBFELL LABS, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KEPCO LABS, INC., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 25-27.
LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. ADV. PG. 573.
Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, Ill. ADV. PG. 536.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 62, 63.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
SUPERIOR ELECTRIC CO., THE, 4000 Mae Ave., Bristol, Conn. ADV. PG. 192, 193.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
WASSERLEIN MFG. CO., INC., 126 Cass St., Joliet, Ill. ADV. PG. 586.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

RELAYS

1. Coaxial
2. Cross-Bar
3. d'Arsonval
4. Differential
5. Electronic, Resistance Activated
6. Frequency Selective
7. High Voltage
8. Impulse
9. Keying and Break-in
10. Latching
11. Mercury
12. Overload
13. Overvoltage & Undervoltage
14. Polarized
15. Power
16. Rotary
17. Sensitive
18. Sequence
19. Stepping
20. Sub-Miniature
21. Telephone
22. Time Delay
23. Vacuum Contact
24. Vibrating Reed Type

Note: (h) indicates hermetically sealed types.

A/G'A DIVISION OF ELASTIC STOP NUT CORP. OF AMERICA, 1029 Newark Ave., Elizabeth 3, N. J. 22. ADV. PG. 442.
ADAMS & WESTLAKE CO., Michigan St., Elkhart, Ind. 11-12-13-15-17-22. ADV. PG. 103-106. (h)
ADVANCE ELECTRIC & RELAY CO., 2435 Naomi St., Burbank, Calif. 1-2-4-5-7-9-10-12-13-14-15-17-20-21-22. ADV. PG. 288. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-4-9-10-12-14-15-17. ADV. PG. 119. (h)
ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. 1-4-7-9-10-12-13-15-16-17-20-21-22. ADV. PG. 194, 195.
Alpha Electronics, Inc., Route #17, Ramsey, N. J. 8-9-13-14-21-24.
American Encaustic Tiling Co., Electronic Div., Lansdale, Pa. 21. (h)
American Instrument Co., 8030 Georgia Ave., Silver Spring, Md. 15-17-22.
American Relay & Controls Inc., 4901 W. Flournoy St., Chicago 44, Ill. 7-10-12-13-15-17-21-22. (h)
AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. 24. ADV. PG. 278.
AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. 22. ADV. PG. 258. (h)
Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn. 10-12-13-22.
Assembly Products, Inc., Chagrin Falls 6, Ohio. 3-12-13-14-17-22.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. 8-10-14-19-20-21-22. (h)
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J. 4-6-13-15-17-22.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. 4-5-22.
B-T Mfg. Corp., 38 N. Second Ave., Mt. Vernon, N. Y. 15-22.
Barber-Colman Co., Rockford, Ill. 14-17.
Bennett Co., Inc., R. P., Frederick, Md. 1-15-20-21. (h)
Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa. 24.
Blonder-Tongue Labs., Inc., 526-536 North Ave., Westfield, N. H. 5-22.
Boehme, Inc., H. O., 915 Broadway, New York 10, N. Y. 9.
Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill. 8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio. 10-12-15-22.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif. 3-4-5-6-10-12-13-14-17-20-24. (h)
Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y. 3-4-17.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. 1-8-9-10-12-13-15-17-18-19-20-21-22. ADV. PG. 494. (h)
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. 21. ADV. PG. 590.
Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill. 4-5-6-7-8-9-10-12-13-15-16-17-18-19-20-21-22. (h)
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. 22. ADV. PG. 143.
Cunningham Son & Co., Inc., James, 13 Canal St., Rochester, N. Y. 2.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis. 12-13-22.
DE COURSEY ENGINEERING LAB., P. O. Box 235, Los Angeles 25, Calif. 15. ADV. PG. 602. (h)

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J. 5.

DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. 6-22. ADV. PG. 609.

Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. 20-22.

Durakool, Inc., 1010 N. Main St., Elkhart, Ind., 11-22.

Ebert Electronics Co., 212-26 Jamaica Ave., Queens Village 28, N. Y. 10-11-15-17.

EDISON, INC., THOMAS A., INSTRUMENT DIV., 81 Lakeside Ave., West Orange, N. J. 12-13-17-22. ADV. PG. 300, 301. (h)

El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J. 17.

Electric Design & Mfg. Corp., Burlington, Iowa. 3.

ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. 4-13. ADV. PG. 220.

Electrical Service Co., 1271 Mission St., San Francisco, Calif. 22.

Electro-Mechanical Specialties Co., 6819 Melrose Ave., Los Angeles 38, Calif. 5-7-12-15-17-20. (h)

ELECTRO-SEAL CORP., 946 North Ave., Des Plaines, Ill. 16-18-21-22. ADV. PG. 40. (h)

EUREKA TELEVISION & TUBE CORP., 69 Fifth Ave., Hawthorne, N. J. 22. ADV. PG. 543. (h)

FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. 5- ADV. PG. 314.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. 8-9-14-16-17-19-21. ADV. PG. 148-153.

Filters, Inc., Electroquipt Controls Div., 30 Sagamore Hill Drive, Port Washington, N. Y. 7-9-16-20.

Five Star Co., 440 Mixville Rd., West Cheshire, Conn. 15-21. (h)

G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. 12-13-22. ADV. PG. 340. (h)

Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y. 19.

General Controls Co., Glendale 1, Calif. 11.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 4-7-8-10-12-13-15-17-18-19-22. ADV. PG. 1-18. (h)

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. 8-9-10-12-13-15-19-21-22. ADV. PG. 253. (h)

Gulton Mfg. Corp., Metuchen, N. J. 1.

Haley Electronics Co., 57 William St., New York 5, N. Y. 5-11.

Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn. 17-20. (h)

HAYDON CO., A. W., The, 232 N. Elm St., Waterbury, Conn. 22. ADV. PG. 477. (h)

HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. 22. ADV. PG. 208, 209. (h)

Heinemann Electric Co., 97 Plum St., Trenton 2, N. J. 12-22.

Hoffman Engineering Corp., Anoka, Minn. 8-10.

Hufco Industries, 2815 W. Olive, Burbank, Calif. 20-21.

Industrial Products Co., Danbury, Conn. 1.

Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y. 7-9-12-15-17-19-20-21.

Industrial Timer Corp., 115 Edison Place, Newark 5, N. J. 22.

JOHNSON CO., E. F., Waseca, Minn. 7. ADV. PG. 404-407.

Jack & Heintz, Inc., Cleveland 1, Ohio. 18.

JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. 7-8-9-10-12-15. ADV. PG. 188-190.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. 2-8-14-18-19-21. ADV. PG. 568.

KURMAN ELECTRIC CO., INC., 35-18 37th St., Long Island City, N. Y. 9-10-14-17-21-22-24. ADV. PG. 617. (h)

LEACH RELAY CO., 5915 Avalon Blvd., Los Angeles 3, Calif. 7-8-9-10-12-15-17-22. ADV. PG. 403. (h)

LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. 8-16-19. ADV. PG. 481.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill. 22.

Mack Electric Devices, 43 Glenside Ave., Wyncote, Pa. 11-15-17-23.

Magnecraft Electric Co., 1450 W. Van Buren St., Chicago 7, Ill. 4-7-8-9-10-12-13-15-17-20-21-22-23-24.

Magnetic Devices, Inc., 712 East St., Frederick, Md. 16-19.

MAXSON CORP., W. L., 460 W. 34th St., New York 34, N. Y. 13. ADV. PG. 144.

May Co., Donald M., 6055 Lankershim Blvd., North Hollywood, Calif. 16-22.

Mercoid Corporation, The, 4201 Belmont Ave., Chicago 41, Ill. 11.

Mercury Contacts, Inc., Box 615-E, Far Hills Station, Dayton 9, Ohio. 11.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 20.

Muirhead & Co., Ltd., Beckenham, Kent, England. 4.

NEOMATIC, INC., 9010 Bellanca Ave., Los Angeles 45, Calif. 4-5-8-9-10-12-13-14-15-17-20. ADV. PG. 336. (h)

North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio. 4-8-9-10-15-16-17-19-20-21-22. (h)

Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill. 16.

Omega Mfg. Co., 40 Hudson St., New York, N. Y. 4-13-15-22.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. 17. ADV. PG. 226. (h)

Phillips Control Corp., Dept. EB 1420, Joliet, Ill. 4-8-9-10-15-17-18-20-21-22. (h)

Photoswitch Inc., 78 Broadway, Cambridge 42, Mass. 5-22.

Polytron Engineering, Inc., 6625 Harford Road, Baltimore 14, Md. 17-20. (h)

POLLACK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. 1-17-21-24. ADV. PG. 580. (h)

POTTER & BRUMFIELD, Princeton, Ind. 2-5-8-9-10-15-17-20-21. ADV. PG. 334. (h)

Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y. 5.

Price Electric Corp., Frederick, Md. 1-7-10-12-15-16-17-18-19-20-21-22.

R.B.M. DIVISION, ESSEX WIRE CORP., Logansport, Ind. 2-5-20. ADV. PG. 261. (h)

Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass. 1.

ROLLER-SMITH CORPORATION, Bethlehem, Pa. 12-13-22. ADV. PG. 118.

Scherma Mfg. Co., Inc., F. A., 424 Broome St., New York 13, N. Y. 1.

Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J. 5.

Sheldon Electric Div., Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J. 22.

SIGMA INSTRUMENTS, INC., 180 Pearl St., South Braintree 85, Mass. 4-5-8-9-12-13-17-22. ADV. PG. 41. (h)

SIGNAL ENGINEERING & MFG. CO., 154-6 W. 14th St., New York 11, N. Y. 1-6-9-10-14-15-17-20-21-22. ADV. PG. 418.

Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass. 13-22.

Square D Co., 4041 N. Richards, Milwaukee 12, Wis. 12-15-22.

Standard Electronics Corp., 289 Emmet St., Newark 5, N. J. 2-5-6-7-8-9-10-11-12-13-14-15-17-21.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England. 6-8-9-10-11-13-14-18-19-22-23-24.

STAVEL CO., INC., Box 431, Bay Shore, N. Y. 7-22. ADV. PG. 353.

STERLING ENGINEERING CO., INC., 54 Mill St., Laconia, N. H. 21. ADV. PG. 126. (h)

STEVENS-ARNOLD, INC., 22 Elkins St., South Boston 27, Mass. 6-9-14-24. ADV. PG. 549. (h)

Stromberg-Carlson Co., Rochester 3, N. Y. 21-24.

Struthers-Dunn, Inc., 150 N. 13th St., Philadelphia 7, Pa. 10-11-15-17-18-19-22. (h)

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y. 7-22. (h)

TERADO CO., 1068 Raymond Ave., St. Paul 14, Minn. 17-20. ADV. PG. 298, 332. (h)

Thermo Instruments Co., Box 336, Belmont, Calif. 15.

U. S. Instrument Corp., 409 Broad St., Summit, N. J. 16.

Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas. 6-13.

Wallace & Tiernan Co., Inc., Belleville 9, N. J. 6.

WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. 9-10-12-13-15-17-22. ADV. PG. 317, 318.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. 3-4-6-7-8-12-13-14-15-18-19-22. ADV. PG. 45-55, 60.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. 3-11-15-17-21-22. ADV. PG. 350.

Wheaton Co., T. C., Electronics Div., Millville, N. J. 17-20. (h)

White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo. 15.

Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J. 22. (h)

Wright-Zimmerman, Inc., New Brighton, Minn. 17-20. (h)

RESISTORS

Fixed Composition

1. Low wattage
2. Temperature sensitive
3. High frequency
4. High megohm
5. High voltage
6. High wattage
7. Voltage sensitive
8. Resistor-suppressor

Variable Composition

9. Controls
10. Controls, High Resistance
11. Controls, High Voltage

Wire Wound

12. 2 Watts and under
13. 4 to 35 Watts
14. 4 to 225 Watts
15. 4 to 500 Watts
16. 500 to 1500 Watts
17. Precision low voltage
18. Precision high voltage
19. Rf non-inductive

Variable Wire Wound

20. 4 Watts and under
21. 5 to 25 Watts
22. 25 Watts and over
23. 500 Watts and over
24. Slide wire
25. Adjustable
26. Rheostat—potentiometer types

Acme Electric Heating Co., 1217 Washington St., Boston, Mass. 14.

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis. 1-9.

Amalgamated Electronics, Electronic Rd., Clinton Corners, N. Y. 20-21-26.

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y. 12-13-14.

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill. 1-4-12-17-18.

Autel Electronics Co., 946 Farmingdale Rd., Westfield, N. J. 9.

Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J. 17.

Avor Corp., 450 Broome St., New York 13, N. Y. 12-13-17-18-19.

BOND ELECTRONICS CORP., 60 Springfield Ave., Springfield, N. J. 12-13-17-18-19. ADV. PG. 129.

BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. 12-17-18-24-25-26. ADV. PG. 368.

BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. 12-17-20-24-25-26. ADV. PG. 610.

BRADLEY LABS, INC., 82 Meadow St., New Haven 10, Conn. 7. ADV. PG. 170.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 8-9-10-11-12-13-14-15-17-18-19-20-21-22-23-25-26.

Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Ore. 20-21-24-26.

Budd-Slanley Co., Inc., 43-01 22rd St., Long Island City 1, N. Y. 3.

Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. 17.

Carter Parts Co., 213 Institute Place, Chicago 10, Ill. 12-20-21-25-26.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. 1-9-20. ADV. PG. 21-24.

CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. 9-10-20-25-26. ADV. PG. 42, 43.

CIMA CORP., 119 Braintree St., Allston, Mass. 13-14-17-18-19-25. ADV. PG. 574.

CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. 12-17. ADV. PG. 289.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio. 15-16.

CLAROSTAT MFG. CO., INC., Dover, N. H. 9-10-11-12-13-14-15-17-18-19-20-21-22-25-26. ADV. PG. 236, 237.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. 12-17-19.

COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, Ill. 12-17. ADV. PG. 601.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif. 12-17-18-20-24-26.

Columbia Resistors, Inc., 216 Lafayette St., New York 12, N. Y. 15-16-19-25.

Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio. 12.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis. 1-5-6-7-9-10-11.

DALE PRODUCTS, INC., Box 1, Columbus, Neb. 12-13-14-17-18-19. ADV. PG. 342, 343.

DAVEN CO., 191 Central Ave., Newark 4, N. J. 12-17-19. ADV. PG. 79.

DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. 26. ADV. PG. 370, 371.

DeWitt Development Co., 12545 S. 69th Ave., Palos Heights, Ill. 12.

EASTERN PRECISION RESISTOR CORP., 130-11 90 Ave., Richmond Hill 18, N. Y. 12-17-18-19. ADV. PG. 560.

Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J. 3.

EDCLIFF INSTRUMENTS, 383 N. Foothill Blvd., Pasadena 8, Calif. 12-26. ADV. PG. 589.

EITEL-McCULLOUGH, INC., San Bruno, Calif. 23. ADV. PG. 378, 379.

ELECTRO-MEC LABORATORY, 210 43rd Ave., Long Island City, N. Y. 17-18-24-26. ADV. PG. 486.

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill. 12-17.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. 5-8. ADV. PG. 121.

Ford Engineering Co., 129 East A St., Upland, Calif. 26.

Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md. 2.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 7-12-13-14-15-16-17-18. ADV. PG. 1-18.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 12-17-19-21-26. ADV. PG. 90, 91.

Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif. 20-24-26.

GLENCO CORP., Metuchen, N. J. 1. ADV. PG. 598.

Globar Division, Carborundum Co., Niagara Falls, N. Y. 1-2-3-4-5-6-7-8.

Hardwick Hindle, Inc., 40 Hermon St., Newark 5, N. J. 13-14-15-22-25-26.
HI-Q DIVISION, AEROVOX CORP., Seneca Ave., Olean, N. Y. 6-8-14. ADV. PG. 202, 203.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. 12-13-14-17. ADV. PG. 525.
 I. E. Manufacturing, 325 N. Hoyle Ave., Chicago 12, Ill. 21-22-23.
I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Philadelphia 30, Pa. 13-14-17-18-21-22-25. ADV. PG. 396.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. 1-3-4-5-6-8-9-10-11-12-13-14-15-17-18-19-20-25. AV. PG. 175-178.
INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. 12-17-18-19. ADV. PG. 424, 425.
 K. F. Development Co., 1867 Woodside Way, San Mateo, Calif. 2-26.
 Keystone Carbon Co., Inc., Saint Marys, Pa. 2.
 Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill. 13-14-15-16-19.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa. 12.
 Lesa, Via Bergamo 21, Milan, Italy. 26.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 9-12-13-14-20-21-24-25-26.
MEPCO, INC., 35-37 Abnett Ave., Morristown, N. J. 12-13-17-18-19. ADV. PG. 98, 99.
 Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y. 12.
MICRO-CIRCUITS CO., New Buffalo, Mich. 2-7. ADV. PG. 160, 609.
 Miller Research Laboratories, 5529 S. Fifth St., Milwaukee 7, Wis. 12-17-18.
 Milwaukee Resistor Co., 700 W. Virginia St., Milwaukee 4, Wis. 12-13-14-15-16-21-22-23-24-25.
 Model Engineering & Manufacturing Inc., Huntington, Ind. 15-21-22-25.
 Muirhead & Co., Ltd., Beckenham, Kent, England. 12.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill. 13-20.
 National Electric Controllor Co., 7070 Glenwood Ave., Chicago 26, Ill. 22-23-25-26.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio. 1-4-5-6-8-12-13-14.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. 1-3-9-10-12-13-14-15-16-17-18-19-21-22-23-24-25-26. ADV. PG. 92.
OHMWEVE CO., 43 Darcy St., West Hartford 6, Conn. 19. ADV. PG. 462.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. 3-12. ADV. PG. 226.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. 22. ADV. PG. 81.
 Precision Electronic Components, Ltd., 560 King St., W., Toronto, Ontario. 9-10-11.
PRECISION RESISTOR CO., 334 Badger Ave., Newark 8, N. J. 12-17-18. ADV. PG. 330.
REON RESISTOR CORP., 117 Stanley Ave., Yonkers, N. Y. 12-13-17-18-19. ADV. PG. 334.
RESISTANCE PRODUCTS CO., 714 Race St., Harrisburg, Pa. 3-4-5-6-12-17-18. ADV. PG. 223.
 Resistors, Inc., 5226 W. 26th St., Chicago 50, Ill. 13-14-19-21-22-25.
 Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y. 1-2-3-4-5-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill. 16.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. 4-5. ADV. PG. 617.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. 9-10-12-13-14-17-18-19-26. ADV. PG. 35.
 Speer Resistor Division, Speer Carbon Co., St. Marys, Pa. 1.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass. 4-5-6-14-17-18-19.
STACKPOLE CARBON CO., St. Marys, Pa. 1-8-9. ADV. PG. 388, 389.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 2.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. 2. ADV. PG. 247-250.
 Symphony Radio & TV Co., 925 S. Western Ave., Los Angeles 6, Calif. 1.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J. 20.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. 20-21-24-26. ADV. PG. 97, 447.
 Telewax Laboratories, Inc., 100 Metropolitan Ave., Brooklyn 11, N. Y. 3.
TOMORE ELECTRIC CORP., 131 Gould St., Rochester 10, N. Y. 12-13-14-15-17. ADV. PG. 622.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y. 17-18.
TRU-OHM PRODUCTS DIV., MODEL ENGINEERING & MFG. INC., 2800 Milwaukee Ave., Chicago, Ill. 13-14-15-16-19-21-22-24-25-26. ADV. PG. 156.
VECTRON, INC., 404 Main St., Waltham 54, Mass. 20-26. ADV. PG. 457.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. 2-7. ADV. PG. 498.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich. 12-17.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. 13-14-15-16-19-22-23-26. ADV. PG. 317, 318.
WATERS MANUFACTURING, INC., 4 Gordon St., Waltham 54, Mass. 26. ADV. PG. 484.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill. 24.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. 17-18. ADV. PG. 45-55, 60.

WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York 16, N. Y. 1-4-5. ADV. PG. 264.
 Wirt Co., 5221 Greene St., Philadelphia 33, Pa. 13-14-16-20-25.
 Yonkers Industries, 28 School St., Yonkers, N. Y. 17-18-19.

RESISTORS—Deposited Carbon

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAMPBELL INDUSTRIES, INC., St. Elmo Station, Chattanooga 9, Tenn. ADV. PG. 102.
 Chase Resistor Co., 9 River St., Morristown, N. J.
DALE PRODUCTS, INC., Box 1, Columbus, Neb. ADV. PG. 342, 343.
ELECTRA MFG. CO., Resistor Div., 2537 Madison Ave., Kansas City, Mo. ADV. PG. 577.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.
WILKOR DIVISION, AEROVOX CORP., 2882 Detroit Ave., Cleveland 13, Ohio. ADV. PG. 202, 203.

RESISTORS—Fuse

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
 Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
 Milwaukee Resistor Co., 700 W. Virginia St., Milwaukee 4, Wis.
 Model Engineering & Manufacturing Inc., Huntington, Ind.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. 1-4-5. ADV. PG. 566.

RESISTORS—Precision, Film Type

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CAMPBELL INDUSTRIES, INC., St. Elmo Station, Chattanooga 9, Tenn. ADV. PG. 102.
 Chase Resistor Co., 9 River St., Morristown, N. J.
 Corning Glass Works, Corning, N. Y.
 Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio.
DALE PRODUCTS, INC., Box 1, Columbus, Neb. ADV. PG. 342, 343.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Electronics of Colorado, Inc., 1026 S. Tejon St., Colorado Springs, Colo.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
RADELL CORP., 7900 Pendleton Pike, Indianapolis 26, Ind. ADV. PG. 158.
 Resistor Corporation of Nevada, P. O. Box 2502, Reno, Nev.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass.
WILKOR DIVISION, AEROVOX CORP., 2882 Detroit Ave., Cleveland 13, Ohio. ADV. PG. 202, 203.

RESISTORS—Printed Strip

CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Circuitron, Inc., 400 Ninth St., Hoboken, N. J.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Gulton Mfg. Corp., Metuchen, N. J.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 566.
SANDERS ASSOCIATES, Nashua, N. H. ADV. PG. 504.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

RESISTORS—Sub-Miniature

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.

Avor Corp., 450 Broome St., New York 13, N. Y.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Chase Resistor Co., 9 River St., Morristown, N. J.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 42, 43.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
DALE PRODUCTS, INC., Box 1, Columbus, Neb. ADV. PG. 342, 343.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
HYCOR COMPANY, INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525.
INSTRUMENT RESISTORS CO., 1036 Commerce Ave., Union, N. J. ADV. PG. 424, 425.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
MEPCO, INC., 35-37 Abnett Ave., Morristown, N. J. ADV. PG. 98, 99.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 566.
PRECISION RESISTOR CO., 334 Badger Ave., Newark 8, N. J. ADV. PG. 330.
REON RESISTOR CORP., 117 Stanley Ave., Yonkers, N. Y. ADV. PG. 334.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass.
 Vokar Corp., 7300 Huron River Dr., Dexter, Mich.

RESOLVERS

Diehl Mfg. Co., 1129 Finnerne Ave., Somerville, N. J.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. ADV. PG. 157.
FORD INSTRUMENT DIV., THE SPERRY CORP., 31-1 Thomson Ave., Long Island City, N. Y. ADV. PG. 582.
GAMEWELL CO., The, Newton Upper Falls 64, Mass. ADV. PG. 268.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
 Kinetix Instrument Co., Inc., 902 Broadway, New York 10, N. Y.
 Micromax Co., 1964 Utica Ave., Brooklyn, N. Y.
 Reeves Instrument Corp., 215 E. 91st St., New York 17, N. Y.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 97, 447.

RHEOSTATS

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Brown Electro-Measurement Corp., 4637 Southeast Hawthorne Blvd., Portland 15, Oreg.
CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 42, 43.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 11, Wis.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 370, 371.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Hardwick Hindle Inc., 40 Hermon St., Newark, N. J.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 175-178.
 Lesa, Via Bergamo 21, Milan, Italy.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Model Engineering & Manufacturing Inc., Huntington, Ind.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 92.
 Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
TRU-OHM PRODUCTS DIV., MODEL ENGINEERING & MFG. INC., 2800 Milwaukee Ave., Chicago, Ill. ADV. PG. 156.

VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
VULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass. ADV. PG. 279.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 317, 318.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

RHEOSTATS—Slide Wire

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Brown Electro-Measurement Corp., 4637 Southeast Hawthorne Blvd., Portland 15, Ore.
Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.
Hardwick Hindle Inc., 40 Hermon St., Newark, N. J.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 92.
Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
STICHT CO., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

RINGS—Carbon Packing

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia 25, Pa.
NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 331.
St. Marys Carbon Co., State Rd., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.

RINGS—Collector

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
ELECTRO TEC CORP., South Hackensack, N. J. ADV. PG. 263, 265.
Industrial Electrical Works, 1509 Chicago St., Omaha 2, Neb.
INSTRUMENTS COMPONENTS, INC., 1834 Franklin St., Santa Monica, Calif. ADV. PG. 277.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.

RINGS—Oil Sealing

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
CARBOLOY DEPT. OF GENERAL ELECTRIC CO., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 20.
Garlock Packing Co., The, Palmyra, N. Y.
Johns-Manville, 22 E. 40th St., New York 16, N. Y.
Minnesota Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.
Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

RINGS—Retaining

Eaton Mfg. Co., Reliance Div., Massillon, Ohio.
Industrial Retaining Ring Co., 8 W. Sidney Ave., Mount Vernon, N. Y.
National Lock Washer Co., 40 Hermon St., Newark 5, N. J.
Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
Waldes Kohinoor Inc., 47-16 Austel Place, Long Island City 1, N. Y.

RIVETS

Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
Autoscrew Co., 216-222 West 18th St., New York, N. Y.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
Cherry Rivet Co., A Div. of Townsend Co., 231 Winston St., Los Angeles 13, Calif.
Chicago Rivet & Machine Co., Bellwood, Ill.
Continental Screw Co., New Bedford, Mass.
Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.
Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
Hassell Inc., John, Clay & Oakland Sts., Brooklyn 22, N. Y.
Huck Mfg. Co., Detroit, Mich.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
Milford Rivet & Machine Co., Milford, Conn.
Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
Rocket Distributors, Inc., 209-14 41 Ave., Bayside 61, N. Y.
Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N. Y.
Screw Corp. of America, 103 Park Ave., New York 17, N. Y.
SOUTHCO DIVISION, SOUTH CHESTER CORP., 1417 Finance Bldg., Philadelphia 2, Pa. ADV. PG. 199.
Stronghold Screw Products, Inc., 216-222 W. Hubbard St., Chicago 10, Ill.
Tubular Rivet & Stud Co., Linden St., Quincy, Mass.
United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.
Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

ROCHELLE SALTS

See Crystals

ROOMS—Screen

ACE ENGINEERING & MACHINE CO., INC., 3642 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 270.
Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
British Electronic Sales Mfg. Co., 23-03 45th Rd., Long Island City 1, N. Y.
Cleveland Wire Cloth Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio.
Eldico of New York, Inc., 44-31 Douglaston Pkwy, Douglaston, N. Y.
G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
RFI SHIELDED ENCLOSURES CORP., 3624 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 549.
SHIELDING, INC., Riverside Park, N. J. ADV. PG. 224.
Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

RUBBER

See Insulation Materials

RUBBER—Conductive

See Insulation Materials

SCALES—Oscilloscope

FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
Gerber Scientific Instrument Co., 89 Spruce St., Hartford 1, Conn.
Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39.

SCANNERS—Reflected & Transmitted Light

Acme Telectronix Div., NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
Industrial Electronics Co., Inc., Hanover, Mass.
Menlo Research Laboratory, Menlo Park, Calif.
Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 384.

SCRAMBLERS—Speech

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.

SCREENS—Television Projection

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

SCREWS—Self-Tapping

Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
American Screw Co., Willimantic, Conn.
Atlas Screw & Specialty Co., 450 Broome St., New York 13, N. Y.
Blake & Johnson Co., Waterville 48, Conn.
Camcar Screw & Mfg. Corp., 600 18th Ave., Rockford, Ill.
Central Screw Co., 3501 Shields Ave., Chicago 9, Ill.
Continental Screw Co., New Bedford, Mass.
Dial Screw Products Co., Inc., 32-21 58th St., Woodside, N. Y.
Eaton Mfg. Co., Reliance Div., Massillon, Ohio.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 522.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
National Screw & Mfg. Co., The, Cleveland 4, Ohio.
Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Pilgrim Screw Co., 259 Dexter St., Providence, R. I.
Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N. Y.
Scovill Manufacturing Co., Waterbury 20, Conn.
Screw Corp. of America, 103 Park Ave., New York 17, N. Y.
Shakeproof Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.
Stronghold Screw Products, Inc., 216-222 W. Hubbard St., Chicago 10, Ill.
United Screw & Bolt Co. p., 2513 W. Cullerton St., Chicago 8, Ill.

SCREWS—Set

ALLEN MFG. CO., Hartford 2, Conn. ADV. PG. 384.
Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.
Atlas Screw & Specialty Co., 450 Broome St., New York 13, N. Y.
Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
Bristol Co., The, Waterbury 20, Conn.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 522.
National Screw & Mfg. Co., The, Cleveland 4, Ohio.
Nylok Corp., Box 341, Elmira, N. Y.
Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N. Y.
Screw Corp. of America, 103 Park Ave., New York 17, N. Y.
Set Screw & Mfg. Co., 470 Main St., Bartlett, Ill.
Shakeproof, Div. of Illinois Tool Works, 2501 N. Keeler Ave., Chicago 39, Ill.
Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.
Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.
Stronghold Screw Products, Inc., 216-222 W. Hubbard St., Chicago 10, Ill.
United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.

SEALING SERVICE—Hermetic

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
ELECTRO SEAL CORP., 946 North Ave., Des Plaines, Ill. ADV. PG. 40.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 608.
HELDOR MFG. CO., DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind. ADV. PG. 390, 391.
MANSOL CERAMICS, 13 Valley St., Belleville, N. J. ADV. PG. 594.
National Inter-Communication Systems, Inc., 1130 N. Milwaukee Ave., Chicago 22, Ill.
SCIENTIFIC ELECTRONIC LABS, INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 545.
SEALTRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
Telectro Industries Corp., 35-18 37th St., Long Island City, N. Y.

Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.
Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.

SEALS—Carbon

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia 25, Pa.
NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 331.
St. Marys Carbon Co., State Road, St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.

SEALS—Hermetic

Automatic & Precision Mfg. Co., 315 E. 91st St., New York 28, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. ADV. PG. 494.
CONSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 125.
Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 4, N. J. ADV. PG. 135.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
ELECTRO-SEAL CORP., 946 North Ave., Des Plaines, Ill. ADV. PG. 40.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 608.
GLASS SOLDER ENGINEERING, 845 El Centro St., South Pasadena, Calif. ADV. PG. 572.
HELDOR MFG. CO., Div. of Helder Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind. ADV. PG. 390, 391.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 235.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
McCormick-Selph Associates, Palo Alto Airport, Palo Alto, Calif.
Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 545.
SEALTRON CO., 9701 Reading Road, Cincinnati 15, Ohio. ADV. PG. 217.
Sperti-Faraday Inc., Cincinnati Div., Cincinnati 2, Ohio.
SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 626.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
Wheaton Co., T. C., Electronic Division, Millville, N. J.
Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.
Zell Products Corp., 276-80 Main St., Norwalk, Conn.

SEALS—Metal-to-Glass

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Cerro de Pasco Corp., 40 Wall St., New York 5, N. Y.
CONSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 125.
ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 4, N. J. ADV. PG. 135.
Electrochemical Industries, Inc., Jacques St., Worcester, Mass.
Electronic Products Co., 111 E. 3rd St., Mt. Vernon, N. Y.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 608.
GLASS SOLDER ENGINEERING, 845 El Centro St., South Pasadena, Calif. ADV. PG. 572.
Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.
HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind. ADV. PG. 390, 391.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark, N. J. ADV. PG. 235.
Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
McCormick-Selph Associates, Palo Alto Airport, Palo Alto, Calif.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
Quality Products Co., 387 Charles St., Providence, R. I.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 545.
SEALTRON CO., 9701 Reading Road, Cincinnati 15, Ohio. ADV. PG. 217.
Sperti-Faraday Inc., Cincinnati Div., Cincinnati 2, Ohio.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
Wheaton Co., T. C., Electronic Div., Millville, N. J.
Zell Products Corp., 276-80 Main St., Norwalk, Conn.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

SEALS—Oil

Armstrong Cork Co., Lancaster, Pa.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
Garlock Packing Co., The, Palmyra, N. Y.
Johns-Manville, 22 E. 40th St., New York 16, N. Y.
Minnesota Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.
Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
Sealor Corporation, 45 Willard Ave., Providence 5, R. I.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
United States Graphite Co., Div. of the Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

SEALS—Switch

Automatic & Precision Mfg. Co., 315 E. 91st St., New York 28, N. Y.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 512.

SELECTIVE CALLING APPARATUS

Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
Electrical Communications Co., 765 Clementina St., San Francisco, Calif.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
Pioneer Electric & Research Corp., 643 Circle Ave., Forest Park, Ill.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
STEVENS-ARNOLD, INC., 22 Elkins St., South Boston, Mass. ADV. PG. 549.

SELENIUM

See Rectifiers—Crystals

SERVICES

See

**Encapsulation
Engraving & Profiling
Packaging—Electronic
Equipment
Plating—Metal on
Plastic
Plating—Precision
Metal**

**Sealing—Hermetic
Silk Screen Processing
Subminiaturization
Tinning—Hot Dipped
Treating—Fungus &
Moisture Proof
Wire Marking**

SERVOMECHANISMS

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BELOGG INSTRUMENT CORP., 13-11 111th St., College Point, N. Y. ADV. PG. 267.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J.
DALMO VICTOR CO., 1414 El Camino Real, San Carlos, Calif. ADV. PG. 191.

ECLIPSE-PIONEER DIV., Bendix Aviation Corp., Teterboro, N. J. ADV. PG. 132, 133.
Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
FORD INSTRUMENT DIV., SPERRY CORP., 31-10 Thomson Ave., Long Island City, N. Y. ADV. PG. 582.
G-M LABORATORIES, 4336 N. Knox Ave., Chicago, Ill. ADV. PG. 497.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 599.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.
Kinetix Instrument Co., Inc., 902 Broadway, New York 10, N. Y.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
Midwestern Geophysical Lab., 3400 S. Harvard, Tulsa, Okla.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
MISSION-WESTERN ENGINEERS, INC., 132-134 W. Colorado St., Pasadena 1, Calif. ADV. PG. 574.
Missouri Research Labs., 2109 Locust St., St. Louis 3, Mo.
Northeastern Engineering Inc., Manchester, N. H.
OSTER MFG. CO., JOHN, 1 Main St., Racine, Wis. ADV. PG. 494.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 483, 439.
Servo-Tek Products Co., Inc., 1086 Goffle Rd., Hawthorne, N. J.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 426.
Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
TRANSCOIL CORP., 107 Grand St., New York 13, N. Y. ADV. PG. 461.
VIDEON ELECTRONIC CORP., 222 E. Ohio St., Indianapolis 4, Ind. ADV. PG. 461.

SHAFTS—Flexible

Flexible Shaft Div., Walker Turner Div., Kearney & Trecker Corp., Plainfield, N. J.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
STEWART MFG. CORP., F. W., 4311 Ravenswood Ave., Chicago 13, Ill. ADV. PG. 452.
Stow Mfg. Co., 445 State St., Binghamton, N. Y.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. ADV. PG. 264.

SHAPERS—Television Signal

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 623.

SHIELDING—Electrostatic

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
Columbia Electric Mfg. Co., 4519 Hamilton Ave., N.E., Cleveland 14, Ohio.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. ADV. PG. 441.
METAL TEXTILE CORP., 647 E. Frst Ave., Roselle, N. J. ADV. PG. 464.
Metaplast Process, Inc., 3451 56th St., Woodside, N. Y.
SHIELDING, INC., Riverside Park, N. J. ADV. PG. 224.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

SHIELDING—Radio Ignition

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J. ADV. PG. 319.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Connecticut Hard Rubber Co., 407 East St., New Haven 8, Conn.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.
Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.
METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 464.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
SCINTILLA MAGNETO DIV., Bendix Aviation Corp., Sidney, N. Y. ADV. PG. 131.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
Whitaker Cable Corp., Kansas City 16, Mo.

SHIELDING—Sheet or Screen

ACE ENGINEERING & MACHINE CO., INC., 3642 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 270.
American Cladmetals Co., P. O. Box 544, Carnegie, Pa.
Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 464.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
RFI SHIELDED ENCLOSURES CORP., 3624 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 549.
SHIELDING, INC., Riverside Park, N. J. ADV. PG. 224.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
York Co., Inc., Otto H., 69 Glenwood Place, East Orange, N. J.

SHIELDS—Cathode Ray Tube

JAN HARDWARE MFG. CO., INC., 25-30 163rd St., Flushing 58, N. Y. ADV. PG. 567.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
MULTI-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 416.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

SHIELDS—Coil

Aluminum Goods Mfg. Co., Manitowoc, Wis.
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
Paul & Beekman Inc., 1801 Cortland St., Philadelphia
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester, Mass.

SHIELDS—Ferrite

CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

SHIELDS—Lead

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
Nucleonic Company of America, 497 Union St., Brooklyn 31, N. Y.
Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.

SHIELDS—Transformer

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

HELDOR MFG. CO. DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.

SHIELDS—Tube

ACCURATE PAPER TUBE CO., 801 North Peoria St., Chicago 22, Ill. ADV. PG. 338.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
Elco Corporation, 190 W. Glenwood Ave., Philadelphia 40, Pa.
Formatic Co., 178 Bridge St., Naugatuck, Conn.
GOAT CO., INC., FRED, 308 Dean St., Brooklyn 7, N. Y. ADV. PG. 557.
HELDOR MFG. CO. DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 369.
METHODO MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 450.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 416.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.
Philco Corp., Tioga & C Sts., Philadelphia 34, Pa.
Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
STAVER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 353.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 595.

SHIFTERS—Signal

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.

SHUNTS—Meter

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
INDUSTRIAL RECTIFIER CO., 120 Cedar St., New York, N. Y. ADV. PG. 616.
Janco Corp., 3111 Winona Ave., Burbank, Calif.
PRECISION RESISTOR CO., 334 Badger Ave., Newark 8, N. J. ADV. PG. 330.
RAPID ELECTRIC CO., 2881 Middletown Rd., New York, N. Y. ADV. PG. 628.
Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

SIGNAL SHIFTER

See Shifters, Signal

SILICON

See Metals

SILICONE—Compounds

See Insulating Compounds

SILICONE CRYSTALS

See Crystals

SILICONE GREASES

Dow Corning Corp., Midland, Mich.
General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
Linde Air Products Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

SILICONE LUBRICANTS

Dow Corning Corp., Midland, Mich.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.

SILICONE OILS

Dow Corning Corp., Midland, Mich.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
Linde Air Products Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

SILICONE RUBBER

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.
Dow Corning Corp., Midland, Mich.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
General Tire & Rubber Co., The, Akron, Ohio.
Melpar, Inc., 452 Swann Ave., Alexandria, Va.
Mica Insulator Co., Schenectady 1, N. Y.
MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
Moore Co., Howard J., 266 William St., New York 38, N. Y.
Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

SILK SCREEN PROCESSING

Cadre Industries Corp., Box 117, 19 Delaware Ave., Endicott, N. Y.
COLONIAL PROCESS SUPPLY CO., 140 W. 23rd St., New York 11, N. Y. ADV. PG. 603.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 496.

SLIDES—Chassis

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 384.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
Edo Corp., College Point, N. Y.
GRANT PULLEY & HARDWARE CO., 31-85 Whitestone Parkway, Flushing, N. Y. ADV. PG. 533.
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 512.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

SLIP RING ASSEMBLIES

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 576.
Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
BREEZE CORPS., INC., 41 S. Sixth St., Newark 7, N. J. ADV. PG. 319.
Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COLLECTRON CORP., 216 E. 45th St., New York 17, N. Y. ADV. PG. 466.
ELECTRO DEVELOPMENT CORP., 6014 W. Washington Blvd., Culver City, Calif. ADV. PG. 440.

ELECTRO TEC CORP., South Hackensack, N. J. ADV. PG. 263, 265.
 GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers 3, N. Y. ADV. PG. 240, 241.
 INSTRUMENT CORP. OF AMERICA, Blacksburg, Va. ADV. PG. 297.
 INSTRUMENTS COMPONENTS, INC., 1834 Franklin St., Santa Monica, Calif. ADV. PG. 277.
 MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.
 Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.
 P. M. Industries, Inc., Stamford, Conn.
 Pioneer Electronics Corp., Santa Monica, Calif.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 SLIP RING CO. OF AMERICA, 2038 Broadway, Santa Monica, Calif. ADV. PG. 588.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

SMOKE

See Detectors

SOCKETS

- | | |
|----------------|--------------------|
| 1. Crystal | 7. Printed Circuit |
| 2. Diode | 8. Relay |
| 3. Lamp | 9. Subminiature |
| 4. Miniature | 10. Transistor |
| 5. Pencil Tube | 11. Tube |
| 6. Pilot Light | 12. Turret |

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio. 2-4-5.
 AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. 3-4-6. ADV. PG. 585.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. 1-3-4-6-7-8-9-10-11-12. ADV. PG. 204, 205.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. 1-2-3-4-8-11. ADV. PG. 111.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn. 3-4.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. 1-8.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. 11. ADV. PG. 581.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 1-2-3-4-5-6-9-11.
 Cable Electric Products Co., Providence, R. I. 3-4.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn. 3.
 CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. 4-9-11. ADV. PG. 21-24.
 CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. 1-2-4-5-7-8-9-10-11-12. ADV. PG. 200, 201.
 DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. 4-7-9. ADV. PG. 370, 371.
 DIALIGHT CORPORATION, 60 Stewart Ave., Brooklyn 37, N. Y. 3-4-6-9. ADV. PG. 348.
 DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. 3. ADV. PG. 61.
 Dyna Labs, Inc., 1075 Stewart Ave., Garden City, N. Y. 9.
 EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. 1-2-4-7-9-11-12. ADV. PG. 523.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y. 3-4.
 EITEL-MCCULLOUGH, INC., San Bruno, Calif. 11. ADV. PG. 378, 379.
 Elco Corporation, 190 W. Glenwood Ave., Philadelphia 40, Pa. 1-4-7-8-9-10-11-12.
 ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. 1-11. ADV. PG. 485.
 FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. 6. ADV. PG. 394.
 Gates Radio Co., Quincy, Ill. 11.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill. 4-11.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. 11. ADV. PG. 1-18.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill. 2-5-9-10.
 GOMBOS CO., INC., JOHN, 103 Montgomery St., Irvington 11, N. J. 4. ADV. PG. 274.
 GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. 2-5. ADV. PG. 462.
 INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. 4-11. ADV. PG. 532.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. 4-5-9-11. ADV. PG. 535.
 Javex, P. O. Box 646, Redlands, Calif. 4-9.
 JOHNSON CO., E. F., Waseca, Minn. 1-4-6-11. ADV. PG. 404-407.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. 1-2.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y. 3-4-6.
 Lesa, Via Bergamo 21, Milan, Italy. 4.
 MACHLETT LABORATORIES, INC., Springdale, Conn. 11. ADV. PG. 460.
 Mandex Corp., 2608 W. 16th St., Chicago 8, Ill. 4-9-11-12.
 METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. 1-4-7-9-10-11. ADV. PG. 450.

Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill. 6.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 1-4-11.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 1-3-4-6.
 Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass. 4.
 MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. 4-5-7-9-10-11. ADV. PG. 292, 293.
 MYCALEX TUBE SOCKET CORPORATION, Clifton Blvd., Clifton, N. J. 4-5-7-9-10-11. ADV. PG. 292, 293.
 NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. 1-4-11-12. ADV. PG. 232, 233.
 NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. 4-11. ADV. PG. 332.
 NEOMATIC, INC., 9010 Bellanca Ave., Los Angeles 45, Calif. 1-4-8-9-10-11. ADV. PG. 336.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y. 11.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. 3. ADV. PG. 356.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. 11.
 RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. 7. ADV. PG. 489.
 Royal Electric Co., Inc., Pawtucket, R. I. 3-4.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y. 6-11.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England. 5.
 Stromberg-Carlson Co., Rochester 3, N. Y. 3.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-2-3-4-6-9-10-11-12. ADV. PG. 654-660.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. 11. ADV. PG. 453.
 UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. 3-6-11. ADV. PG. 398.
 UNITED MFG. & SERVICE, 405 S. 6th St., Milwaukee 4, Wis. 3. ADV. PG. 266.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. 1-4-11. ADV. PG. 530, 531.
 VECTOR ELECTRONIC CO., 3352 San Fernando Rd., Los Angeles 65, Calif. 4-12. ADV. PG. 507.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 10.
 WINCHESTER ELECTRONICS, INC., 15 Crescent Rd., Glenbrook, Conn. 11. ADV. PG. 174.

SOLDER

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
 AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City, N. Y.
 Cerro de Pasco Corp., 40 Wall St., New York 5, N. Y.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Dunton Co., M. W., 7 Goff St., Providence 3, R. I.
 Farrell Co., 1245 N. 26th St., Philadelphia 21, Pa.
 FEDERATED METALS DIV., AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.
 Glaser Lead Co., Inc., 31 Wycoff Ave., Brooklyn 27, N. Y.
 KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 39, Ill. ADV. PG. 465.
 LENK MFG. CO., THE, 30 Cummington St., Boston 15, Mass. ADV. PG. 616.
 MITCHELL RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 MULTICORE SALES CORP., 164 Duane St., New York 13, N. Y. ADV. PG. 77.
 MULTICORE SOLDERS, LTD., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshire, England. ADV. PG. 77.
 National Lead Co., 111 Broadway, New York 6, N. Y.
 New York Solder Co., 684 E. 133rd St., New York 54, N. Y.
 Ruby Chemical Co., 68 McDowell St., Columbus, Ohio.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 Super Flow Solder Co., Inc., 90 State St., Albany, N. Y.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Wall Mfg. Co., Grove City, Pa.

SOLDER—Aluminum

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Farrelly Co., 1245 N. 26th St., Philadelphia 21, Pa.
 Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
 KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 39, Ill. ADV. PG. 465.
 LENK MFG. CO., THE, 30 Cummington St., Boston 15, Mass. ADV. PG. 616.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Wall Mfg. Co., Grove City, Pa.

SOLDER—Platinum

AMERICAN PLATINUM WORKS, N.J. R.R. Ave., at Oliver St., Newark 5, N. J. ADV. PG. 613.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Handy & Harman, 82 Fulton St., New York 38, N. Y.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Metz Refining Co., 369 Mulberry St., Newark 2, N. Y.
 NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

SOLDER—Rings and Preforms

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
 AMERICAN PLATINUM WORKS, N.J. R.R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 ART WIRE & STAMPING CO., 227 High St., Newark 1, N. J. ADV. PG. 436.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 FEDERATED METALS DIV., AMERICAN SMELTING & REFINING CO., 120 Broadway, New York 5, N. Y. ADV. PG. 373.
 Handy & Harman, 82 Fulton St., New York 38, N. Y.
 KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 39, Ill. ADV. PG. 465.
 MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 MULTICORE SOLDERS LTD., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshire, England. ADV. PG. 77.
 NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
 Soldering Specialties Co., 19 Chatham Rd., Summit, N. J.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Wall Mfg. Co., Grove City, Pa.

SOLDER—Silver

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
 AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 1, R. I.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Handy & Harman, 82 Fulton St., New York 38, N. Y.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
 MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Metz Refining Co., 369 Mulberry St., Newark 2, N. Y.
 MULTICORE SOLDERS, LTD., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshire, England. ADV. PG. 77.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 Super Flow Solder Co., Inc., 90 State St., Albany, N. Y.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

SOLDERING IRONS—

See Irons, Soldering

SOLENOIDS

A. P. W. Co., 72 W. Main St., Rockaway, N. J.
 Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City, N. Y.
 CANNON ELECTRIC CO., 3209 Humboldt St., Los Angeles 31, Calif. ADV. PG. 491.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. ADV. PG. 494.

Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.

Cooper Co., Clark, 349 N. Market St., Palmyra, N. J. Duetler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

Delco Radio Div., General Motors Corp., Kokomo, Ind. Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.

ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 4, N. J. ADV. PG. 135.

Five Star Co., 440 Mixville Rd., West Cheshire, Conn. GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 253.

Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.

International Television Corp., 238 William St., New York 38, N. Y.

Jobbins Electronic Enterprises, Menlo Park, Calif. LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.

LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. ADV. PG. 481.

LENK MFG. CO., THE, 30 Cummington St., Boston 15, Mass. ADV. PG. 616.

McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.

Maack Electric Devices, 43 Glenside Ave., Wyncote, Pa. MAGNAVOX CO., The Components Div., Fort Wayne 4, Indiana. ADV. PG. 328.

Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.

National Acme Co., 170 E. 131st St., Cleveland 8, Ohio.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.

PSP Engineering Co., 8420 Otis St., South Gate, Calif. Phillips Control Corp., Dept. EB#420, Joliet, Ill.

PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 160.

Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.

Scully Machine Co., 62 Walter St., Bridgeport, Conn. Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.

Transvision, Inc., 460 North Ave., New Rochelle, N. Y. Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

West Coast Electrical Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.

West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

SOLENOIDS—Rotary

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.

LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. ADV. PG. 481.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

West Coast Electrical Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.

SOLENOIDS—Sub-Miniature

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.

Five Star Co., 440 Mixville Rd., West Cheshire, Conn. NEOMATIC, INC., 9010 Bellanca Ave., Los Angeles 45, Calif. ADV. PG. 336.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.

PSP Engineering Co., 8420 Otis St., South Gate, Calif. Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

West Coast Electrical Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.

SOLENOIDS—Sub-Miniature

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.

Five Star Co., 440 Mixville Rd., West Cheshire, Conn. NEOMATIC, INC., 9010 Bellanca Ave., Los Angeles 45, Calif. ADV. PG. 336.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.

PSP Engineering Co., 8420 Otis St., South Gate, Calif. Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

West Coast Electrical Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.

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Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.

Five Star Co., 440 Mixville Rd., West Cheshire, Conn. NEOMATIC, INC., 9010 Bellanca Ave., Los Angeles 45, Calif. ADV. PG. 336.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.

PSP Engineering Co., 8420 Otis St., South Gate, Calif. Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.

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West Coast Electrical Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.

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Five Star Co., 440 Mixville Rd., West Cheshire, Conn. NEOMATIC, INC., 9010 Bellanca Ave., Los Angeles 45, Calif. ADV. PG. 336.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.

PSP Engineering Co., 8420 Otis St., South Gate, Calif. Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

SOUND SYSTEMS—Complete

ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, Ill. ADV. PG. 542.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Anslay Mfg. Co., Arthur, Doylestown, Pa.

Audio-Master Corp., 341 Madison Ave., New York 17, N. Y.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Bell Sound Systems, Inc., 555 Merion Rd., Columbus 7, Ohio.

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.

Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.

Dilks Co., The, Seymour, Conn. Farmers Engineering & Mfg. Co., Irwin, Pa.

Gates Radio Co., Quincy, Ill.

Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.

Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.

Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, Ill.

Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.

Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.

Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.

Stromberg-Carlson Co., Rochester 3, N. Y.

Weingarten Electronic Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.

SPEAKER DRIVER UNITS

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.

Audicraft, Inc., 77 S. Fifth St., Brooklyn 11, N. Y.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.

Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.

Dilks Co., The, Seymour, Conn. Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.

Electro-Voice, Inc., Buchanan, Mich. Eltran Corp., St. Anne, Ill.

Holl Audio Inc., 5014 N. Encinita Ave., Temple City, Calif.

Jensen Mfg. Co., 6601 S. Larmie Ave., Chicago 38, Ill.

Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.

McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.

OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.

PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.

Racon Electric Co., 52 E. 19th St., New York 3, N. Y.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.

Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Stromberg-Carlson Co., Rochester 3, N. Y.

UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.

SPEAKERS

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Becker Electronics Mfg. Corp., Horton & Rockaway Aves., Valley Stream, N. Y.

Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

British Industries Corp., 164 Duane St., New York 13, N. Y.

Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.

C. S. Mfg. Co., 4089 Lincoln Blvd., Venice, Calif.

Carbonneau Industries, Inc., 100 Lexington W., Grand Rapids, Mich.

Cinaudagraph Speakers, 7334 N. Clark St., Chicago 26, Ill.

Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland, Ohio.

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.

Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.

Dalmotron Co., 534 Laurel St., San Carlos, Calif.

Delco Radio Div., General Motors Corp., Kokomo, Ind. Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.

Duotone Co., Inc., Keyport, N. J. Electro-Voice, Inc., Buchanan, Mich.

Eltran Corp., St. Anne, Ill. GALBRAITH & SON ELECTRIC CORP., C. C., 450 Avenue of the Americas, New York 11, N. Y. ADV. PG. 542.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.

Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.

Goodmans Industries, Ltd., Axiom Works, Wembley, Middlesex, England.

Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.

HEPPNER MFG. CO., P. O. Box 612, Round Lake, Ill. ADV. PG. 243.

Holl Audio Inc., 5014 N. Encinita Ave., Temple City, Calif.

Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill. Klipsch & Associates, Hope, Ark.

Lansing Sound Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.

Lesla, Via Bergamo 21, Milan, Italy.

McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.

MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.

Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, Ill.

PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.

Quam-Nichols Co., Marquette Rd. & Prairie Ave., Chicago 37, Ill.

Racon Electric Co., 52 E. 19th St., New York 3, N. Y.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.

Rola Co., Inc., The, 2530 Superior Ave., Cleveland 14, Ohio.

Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

Stromberg-Carlson Co., Rochester 3, N. Y.

Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.

UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.

UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 490.

Wright-Zimmerman, Inc., New Brighton, Minn.

Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

SPEAKERS—Dual Cone

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.

Bozak Co., R. T., The, 114 Manhattan St., Stamford, Conn.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

British Industries Corp., 164 Duane St., New York 13, N. Y.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.

Electro-Voice, Inc., Buchanan, Mich. Eltran Corp., St. Anne, Ill.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.

Goodmans Industries, Inc., Axiom Works, Wembley, Middlesex, England.

Holl Audio Inc., 5014 N. Encinita Ave., Temple City, Calif.

Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.

Klipsch & Associates, Hope, Ark.

Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.

McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.

OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 602.

PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.

Quam-Nichols Co., Marquette Rd. & Prairie Ave., Chicago 37, Ill.

Racon Electric Co., 52 E. 19th St., New York 3, N. Y.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Stromberg-Carlson Co., Rochester 3, N. Y.

UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 490.

SPEAKERS—Flame & Explosion-proof

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Executone, Inc., 415 Lexington Ave., New York 17, N. Y.
 Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.

SPEAKERS—Marine Speaker Systems

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Eltron Corp., St. Anne, Ill.
GALBRAITH & SON ELECTRIC CORP., C. C., 450 Avenue of the Americas, New York 11, N. Y. ADV. PG. 542.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516.
 Racon Electric Co., 52 E. 19th St., New York 3, N. Y.
 Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Stromberg-Carlson Co., Rochester 3, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 490.

SPECTROMETERS—Mass

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Vacuum Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.

SPECTROMETERS and SPECTROGRAPHS

American Optical Co., Box A, Buffalo 15, N. Y.
 Applied Research Labs., 4336 San Fernando Rd., Glendale 4, Calif.
 Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
 Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
 Gaertner Scientific Corp., 1239 Wrightwood Ave., Chicago 14, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland, Ohio.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Perkin-Elmer Corp., The Main Ave., Norwalk, Conn.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 392, 393.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

SPECTROPHOTOMETERS

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 American Optical Co., Box A, Buffalo 15, N. Y.

Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
 Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.
 Gaertner Scientific Corp., 1239 Wrightwood Ave., Chicago 14, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass.
 Librascope, Inc., 1607 Flower St., Glendale 1, Calif.
 Missouri Research Labs., 2109 Locust St., St. Louis 3, Mo.
 Perkin-Elmer Corp., The Main Ave., Norwalk, Conn.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

SPECTROSCOPIC SOURCE UNITS

Applied Research Labs., 4336 San Fernando Rd., Glendale 4, Calif.
 Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
 Jarrell-Ash Co., 165 Newberry St., Boston 16, Mass.
 National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland, Ohio.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.

SPEECH INPUT CONSOLES

See Amplifiers, Audio Input Systems

SPLICERS—for Magnetic Recording Tape

Kinevox Corp., 116 S. Hollywood Way, Burbank, Calif.
 Magnasync Mfg. Co., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Maurer, Inc., J. A., 37-01 31st St., Long Island City, N. Y.

SPRINGS

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
 Ace Spring Mfg. Co., 77 W. Houston St., New York 12, N. Y.
 All-Weather Springs, 140 Cedar St., New York, N. Y.
 Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
 Dzus Fastener Co., Inc., Box 185, Babylon, N. Y.
 Garrett Co., Inc., George K., D & Tioga Sts., Philadelphia 34, Pa.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Hunter Spring Co., 21 Spring Ave., Lansdale, Pa.
INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. ADV. PG. 441.
LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
 Newcomb Spring Corp., 3907 7th Ave., Brooklyn 32, N. Y.
 Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
 Sandsteel Spring Div., Sandvik Steel, Inc., 145 Hudson St., New York 13, N. Y.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Telefoto Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
 Webster Spring Corp., 176-182 Johnson St., Brooklyn 1, N. Y.

SPRINGS—Antenna Tension

LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
 Newcomb Spring Corp., 3907 7th Ave., Brooklyn 32, N. Y.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
 Sandsteel Spring Div., Sandvik Steel, Inc., 145 Hudson St., New York 13, N. Y.
 Webster Spring Corp., 176-182 Johnson St., Brooklyn 1, N. Y.

SPRINGS—Instrument Hairsprings

Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
 Newcomb Spring Corp., 3907 7th Ave., Brooklyn 32, N. Y.

Sandsteel Spring Div., Sandvik Steel, Inc., 145 Hudson St., New York 13, N. Y.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

SPRINGS—Precision

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
 Ace Spring Mfg. Co., 77 West Houston St., New York 12, N. Y.
 All-Weather Springs, 140 Cedar St., New York, N. Y.
 Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. ADV. PG. 441.
LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
 Lewis Spring & Mfg. Corp., 2656 W. North Ave., Chicago 47, Ill.
 Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, Ill.
 Newcomb Spring Corp., 3907 7th Ave., Brooklyn 32, N. Y.
 Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
 Sandsteel Spring Div., Sandvik Steel, Inc., 145 Hudson St., New York 13, N. Y.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
 Webster Spring Corp., 176-182 Johnson St., Brooklyn 1, N. Y.

STAMPS—Marking

KREngle MFG. CO., INC., 227 Fulton St., New York 1, N. Y. ADV. PG. 503.
 Numberall Stamp & Tool Co., Huguenot Park, Staten Island 12, N. Y.
 Schmidt, Inc., George T., 4100 Ravenswood Ave., Chicago 13, Ill.

STANDARDS—Capacitance

STANDARDS—Frequency

STANDARDS—Inductance

See Instruments—Electrical Measuring

STANDARDS—Frequency, Microwave

See Microwave Accessories

STANDARDS—Laboratory Time

AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 36, N. Y. ADV. PG. 505.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
NORRMAN LABORATORIES, ERNST, Williams Bay, Wis. ADV. PG. 620.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.

STANDARDS—Resistance

See Instruments—Electrical Measuring

STANDARDS EQUIPMENT—Calibration

Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 2, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 13.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 12, 123.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 512.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potomac St., Cambridge 42, Mass. ADV. PG. 592.
 Southwest Engineering & Mfg. Co., P. O. Box 332, San Diego 3, Calif.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.

STANDARD WAVE

See Detectors

STANDS—Microphone

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
 American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
 Astatic Corporation, The, Conneaut, Ohio.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Eastern Mike-Stand Co., 56 Christopher Ave., Brooklyn 12, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, Ill. ADV. PG. 210.
 Special Products Co., Silver Spring, Md.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
 Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.

STANDS—Speaker

Astatic Corporation, The, Conneaut, Ohio.
 Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
 Queens Tool Engineering & Mfg. Co., 15 Front St., Rockville Centre, N. Y.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

STEATITE

See Insulation Materials

STETHOGRAPHS AND STETHOPHONES

Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, Ill.

STETHOSCOPES—Amplifying

Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis 1, Minn.
 Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, Ill.
SANBORN CO., Industrial Div., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 513.

STRAIGHTENERS—Pin, Tube

DURO SPECIALTY CO., INC., 811 Boston St., West Lynn, Mass. ADV. PG. 436.
 Production Tool & Fixture Co., 37 West Main St., Oyster Bay, N. Y.

STIMULATORS

AMERICAN ELECTRONIC LABS., INC., 641 Arch St., Philadelphia 6, Pa. ADV. PG. 528.
 Edn Co., Inc., 207 Main St., Worcester, Mass.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hanover Developments, 401 E. 74th St., New York, N. Y.
 Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Standard Electronics Research Corp., 2 E. End Ave., New York 21, N. Y.
 Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.

STRAIN INDICATORS

See Indicators

STRAIN RELIEFS

CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
HEYMAN MFG. CO., Kenilworth 2, N. J. ADV. PG. 554.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Thomas & Betts Co., 36 Butler St., Elizabeth 1, N. J.
WALKER CO., GEORGE, 118 Amsterdam Ave., Passaic, N. J. ADV. PG. 497.

STRIPS—Mounting

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio.

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
EBY, INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
 Mica Insulator Co., Schenectady 1, N. Y.
 Philmore Mfg. Co., Inc., 113 University Pl., New York 3, N. Y.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
UCINITE CO., Div. of United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
VECTOR ELECTRONIC CO., 3352 San Fernando Rd., Los Angeles 65, Calif. ADV. PG. 507.

STROBOSCOPES

Associated Research, Inc., 3798 W. Belmont Ave., Chicago 18, Ill.
BERKSHIRE LABORATORIES, 580 Beaver Rd., Lincoln, Mass. ADV. PG. 562.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. ADV. PG. 524.
 Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. ADV. PG. 127.
 Pantek Co., Box 16945, West Branch, Los Angeles 46, Calif.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

SUBMINIATURIZATION SERVICES

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. ADV. PG. 524.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 305.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
 Hillyer Instrument Co., Inc., 54 Lafayette St., New York 13, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
INSTRUMENTS COMPONENTS, INC., 1834 Franklin St., Santa Monica, Calif. ADV. PG. 277.
 Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda, Md.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 Malco Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
P C A ELECTRONICS, INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 566.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 626.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Techron Co., 254-256 Friend St., Boston 14, Mass.
 Video Corp. of America, 229 W. 28th St., New York 1, N. Y.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.

SUPPRESSORS—Auto Radio Ignition

ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 296.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 121.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.
INSULINE CORP. OF AMERICA, 36-02 35th St., Long Island City, N. Y. ADV. PG. 535.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London, W. 3, England.

SUPPRESSORS—Noise

AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 296.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Filtron Co., Inc., The, 131-05 Fowler Ave., Flushing, N. Y.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Lyso Mfg. Co., 82 Herman St., East Rutherford, N. J.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Special Products Co., Silver Spring, Md.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London, W. 3, England.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

SURFACE ANALYZERS AND COMPARATORS

See Analyzers

SURPLUS NEW & USED EQUIPMENT

See Pages 629 to 652

SWITCHES—Automatic

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Bristol Co., The, Waterbury 20, Conn.
 Cutler-Hammer, Inc., 411 North 12th St., Milwaukee 1, Wis.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. ADV. PG. 208, 209.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

SWITCHES—Coaxial Cable

BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 66.
 Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.
GENERAL COMMUNICATION CO., 681 Beacon St., Boston 15, Mass. ADV. PG. 311.
 Industrial Products Co., Danbury, Conn.
 Thompson Products, Inc., Electronics Div., 2196 Clarkwood Rd., Cleveland 3, Ohio.
 Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif.

SWITCHES—Control

Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind., ADV. PG. 42, 43.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. ADV. PG. 494.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 579.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
GALBRAITH & SON ELECTRIC CORP., C. C., 450 Ave. of the Americas, New York 11, N. Y. ADV. PG. 542.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 21, Ill. ADV. PG. 253.
 Hetherington, Inc., Sharon Hill, Pa.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Micro Switch, Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 National Acme Co., 170 E. 131st St., Cleveland 8, Ohio.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 92.
 R-F Electronics, Inc., 291 N.E. 61st St., Miami 37, Fla.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
 Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
STAYER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 353.
 Tech Laboratories, Inc., Bergen & Edsall Bldgs., Palisades Park, N. J.
 Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
 Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.
 Vokar Corp., 7300 Huron River Dr., Dexter, Mich.

SWITCHES—Decade

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV. PG. 462.
 Hetherington, Inc., Sharon Hill, Pa.
 J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 R-F Electronics, Inc., 291 N. E. 61st St., Miami 37, Fla.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Tech Laboratories, Inc., Bergen & Edsall Bldgs., Palisades Park, N. J.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SWITCHES—Duplex

Brelco Electronics Corp., 55 Vandam St., New York 13, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. ADV. PG. 494.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
 Hetherington, Inc., Sharon Hill, Pa.

SWITCHES—Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.

Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
COMAR ELECTRIC CO., 3349 W. Addison, Chicago 18, Ill. ADV. PG. 494.
 Cunningham Son & Co., Inc., James, 13 Canal St., Rochester, N. Y.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GOMBOS CO., INC., JOHN, 103 Montgomery Ave., Irvington 11, N. J. ADV. PG. 274.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Hetherington, Inc., Sharon Hill, Pa.
 J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Photoswitch Inc., 78 Broadway, Cambridge 42, Mass.
POLLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. ADV. PG. 580.
 R-F Electronics, Inc., 291 N. E. 61st St., Miami 37, Fla.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Thermo Instruments Co., Box 336, Belmont, Calif.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Weltron Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

SWITCHES—Float Type

Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
 Cutler-Hammer, Inc., 411 North 12th St., Milwaukee 1, Wis.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hetherington, Inc., Sharon Hill, Pa.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Thermo Instruments Co., Box 336, Belmont, Ohio.
 Trumbull Electric Dept. of General Electric Co., Plainville, Conn.
 Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.

SWITCHES—Key

Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Clare Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 268.
 Hetherington, Inc., Sharon Hill, Pa.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
KELLOGG SWITCHBOARD & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 North Electric Mfg. Co., 501 S. Mar'et St., Galion, Ohio.
 Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
SWITCHCRAFT INC., 1328-30 N. Halsted St., Chicago 22, Ill. ADV. PG. 306.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SWITCHES—Knife

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Cable Electric Products Co., Providence, R. I.
 Cutler-Hammer, Inc., 411 North 12th St., Milwaukee 1, Wis.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.

Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
 Hetherington, Inc., Sharon Hill, Pa.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
 Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Philmore Mfg. Co., Inc., 113 University Pl., New York 13, N. Y.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Trumbull Electric Dept. of General Electric Co., Plainville, Conn.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SWITCHES—Limit

Acro Mfg. Co., 2040 E. Main St., Columbus, Ohio.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
CHERRY-CHANNER CORP., 1488 Skokie Blvd., Highland Park, Ill. ADV. PG. 422, 593.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Electro-Snap Switch & Mfg. Co., 4218 W. Lake St., Chicago 24, Ill.
GALBRAITH & SON ELECTRIC CORP., C. C., 450 Ave. of the Americas, New York 11, N. Y. ADV. PG. 542.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hetherington, Inc., Sharon Hill, Pa.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Mercoid Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.
 Micro Switch, Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
TYNISWITCH DIVISION, SESSIONS CLOCK CO., Forrestville, Conn. ADV. PG. 458.
 Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.
WESTINGHOUSE ELECTRIC CO., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.

SWITCHES—Mercury

Durakool, Inc., 1010 N. Main St., Elkhart, Ind.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
LITTELFUSE, INC., Des Plaines, Ill. ADV. PG. 482.
 Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.
 Mercury Contacts, Inc., Box 615-E, Far Hills Station, Dayton 9, Ohio.
 Micro Switch Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
 Radiation Counter Laboratories, Inc., 5122 W. Grov St., Skokie, Ill.
 Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.

SWITCHES—Microwave

See Microwave Accessories

SWITCHES—Rotary and Band Change

AIRTRON INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 42, 43.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Communication Products Co., Inc., Marlboro, N. J.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.

Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
ELECTRO DEVELOPMENT CORP., 6014 W. Washington Blvd., Culver City, Calif. ADV. PG. 440.
ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 579.
GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 268.
GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV. PG. 462.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
 Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
 Hetherington, Inc., Sharon Hill, Pa.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.
J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. ADV. PG. 481.
 Lesa, Via Bergamo 21, Milan, Italy.
 Mallory & Co., Inc., P. R. 3029 E. Washington St., Indianapolis 6, Ind.
 Network Mfg. Co., 213 W. Fifth St., Bayonne, N. J.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 92.
R-F Electronics, Inc., 291 N. E. 61st St., Miami 37, Fla.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
SWITCHCRAFT, INC., 1328-30 N. Halsted St., Chicago 22, Ill. ADV. PG. 306.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Thompson Products, Inc., Electronics Div., 2196 Clarkwood Ave., Cleveland 3, Ohio.
 Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.
 U. S. Instrument Corp., 409 Broad St., Summit, N. J.
 Vison Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

SWITCHES—Safety

Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Electro-Snap Switch & Mfg. Co., 4218 W. Lake St., Chicago 24, Ill.
 Federal Electric Products Company, 50 Paris St., Newark, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hetherington, Inc., Sharon Hill, Pa.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
 Micro Switch Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.
 Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Trumbull Electric Dept. of General Electric Co., Plainville, Conn.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.

SWITCHES—Slide

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Hetherington, Inc., Sharon Hill, Pa.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JFD MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.

States Co., 19 New Park Ave., Hartford 6, Conn.
 Wirt Co., 5221 Greene Street, Philadelphia 44, Pa.

SWITCHES—Snap Action

Acro Mfg. Co., 2040 E. Main St., Columbus, Ohio.
 Acro-Mu Switch Div., Acro Mfg. Co., Columbus, Ohio.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Cable Electric Products Co., Providence, R. I.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CHERRY-CHANNER CORP., 1488 Skokie Blvd., Highland Park, Ill. ADV. PG. 422, 593.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 42, 43.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. ADV. PG. 494.
 Control Products, Inc., 306 Sussex St., Harrison, N. J.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
 Electro-Snap Switch & Mfg. Co., 4218 W. Lake St., Chicago 24, Ill.
ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 579.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV. PG. 462.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 253.
 Hetherington, Inc., Sharon Hill, Pa.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JFD MFG. CO., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
 Micro Switch Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 Mu Switch Division, Acro Switch Co., 38 Pequit St., Canton, Mass.
 National Acme Co., 170 E. 131st St., Cleveland 8, Ohio.
POLLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. ADV. PG. 580.
SESSIONS CLOCK CO., Forestville, Conn. ADV. PG. 459.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
TYNISWITCH DIVISION, SESSIONS CLOCK CO., Forestville, Conn. ADV. PG. 458.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.

SWITCHES—Step Type

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
 Bristol Co., The, Waterbury 20, Conn.
 Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. 8, Los Angeles 15, Calif.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Cutler-Hammer, Inc., 411 North 12th St., Milwaukee 1, Wis.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 Hetherington, Inc., Sharon Hill, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

SWITCHES—Tap

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.

Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 British Electronic Sales Co., 23-3 45th Rd., Long Island City 1, N. Y.
 Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 289.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A., Los Angeles 15, Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
 Eastern Specialty Co., Philadelphia 40, Pa.
ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 579.
GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV. PG. 462.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
 Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
 Hetherington, Inc., Sharon Hill, Pa.
 Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
 J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.
OHMITE MFG. CO., 4835 W. Flournoy St., Chicago 44, Ill. ADV. PG. 92.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Pioneer Electronics Corp., Santa Monica, Calif.
 R-F Electronics, Inc., 291 N. E. 61st St., Miami 37, Fla.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SWITCHES—Time

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRISTOL MOTOR DIVISION, Vocaline Company of America, Inc., Old Saybrook, Conn. ADV. PG. 279.
COMAR ELECTRIC CO., 3349 W. Addison St., Chicago 18, Ill. ADV. PG. 494.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hagen Mfg. Co., Inc., Baraboo, Wis.
HAYDON MFG. CO., INC., 584 E. Elm St., Torrington, Conn. ADV. PG. 208, 209.
 Hetherington, Inc., Sharon Hill, Pa.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 Paragon Electric Co., Two Rivers, Wisconsin.
 Reliance Automatic Lighting Co., 1919 Mead St., Racine, Wis.
 Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.
SESSIONS CLOCK CO., Forestville, Conn. ADV. PG. 459.
 Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

SWITCHES—Toggle and Pushbutton

Acro Mfg. Co., 2040 E. Main St., Columbus, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Bristol Co., The, Waterbury 20, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Cable Electric Products Co., Providence, R. I.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
 Carter Parts Co., 213 Institute Place, Chicago 10, Ill.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Britannia St., Meriden, Conn. ADV. PG. 590.

Control Products, Inc., 306 Sussex St., Harrison, N. J.

Cutler-Hammer Inc., 411 N. 12th St., Milwaukee 1, Wis.

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.

Electro-Snap Switch & Mfg. Co., 4218 W. Lake St., Chicago 24, Ill.

Federal Electric Products Co., 50 Paris St., Newark 5, N. J.

FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV. PG. 482.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.

Hetherington, Inc., Sharon Hill, Pa.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.

Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.

Majlory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.

Micro Switch Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.

National Acme Co., 170 E. 131st St., Cleveland 8, Ohio.

Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.

North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.

Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.

PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 226.

Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

POLLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. ADV. PG. 530.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.

SHURE BROTHERS, INC., 225 W. Huron St., Chicago 10, Ill. ADV. PG. 210.

Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.

Square D Co., 4041 N. Richards, Milwaukee 12, Wis.

STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.

Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.

SWITCHCRAFT, INC., 1328-30 N. Halstead St., Chicago 22, Ill. ADV. PG. 306.

Trumbull Electric Dept. of General Electric Co., Plainville, Conn.

TYNISWITCH DIVISION, SESSIONS CLOCK CO., Forestville, Conn. ADV. PG. 458.

UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.

Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.

WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 317, 318.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Hetherington, Inc., Sharon Hill, Pa.

JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. ADV. PG. 188-190.

Mack Electric Devices, 43 Glenside Ave., Wyncote, Pa.

Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.

Pioneer Electronics Corp., Santa Monica, Calif.

SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 545.

Sperti-Faraday Inc., Cincinnati Div., Cincinnati 2, Ohio.

Square D Co., 4041 N. Richards, Milwaukee 12, Wis.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.

SYNCHROS

See Servos

SYNCSOPIES

BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 444.

DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.

Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.

FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Haledy Electronics Co., 57 William St., New York 5, N. Y.

Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

Koilsman Instrument Corp., 80-08 45 Ave., Elmhurst, N. Y.

LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 234.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

TACHOMETERS—Electronic

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.

BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.

Bristol Co., The, Waterbury 20, Conn.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Dectron Co., 5631 Cahuenga Blvd., North Hollywood, Calif.

Diehl Mfg. Co., 1129 Finnerne Ave., Somerville, N. J.

ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 592.

Foxboro Co., The, Foxboro, Mass.

FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 411.

KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.

MERCURY ELECTRONIC CO., Box 450, Red Bank, N. J. ADV. PG. 127.

Metron Instrument Co., 432 Lincoln St., Denver 9, Colo.

Micro Balancing, Inc., 191 Herricks Rd., Garden City Park, N. Y.

Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.

Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.

Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

TAPE—Recording

American Silver Co., Inc., 36-07-Prince St., Flushing-54, N. Y.

AUDIO DEVICES INC., 444 Madison Ave., New York 22, N. Y. ADV. PG. 347.

Audio-Master Corp., 289 Madison Ave., New York 17, N. Y.

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.

Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.

Duotone Co., Inc., Keyport, N. J.

Fidelitone Corp., 1616 Devon Ave., Chicago 26, Ill.

Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.

Jensen Industries, Inc., 329 S. Wood St., Chicago, Ill.

Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.

Orradio Industries, Inc., T-120 Marvyn Rd., Opelika, Ala.

Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Ill.

Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.

Permo, Inc., 6415 Ravenswood Ave., Chicago 26, Ill.

Rangertone, Inc., 73 Winthrop St., Newark 4, N. J.

Recordisc Corp., 395 Broadway, New York, N. Y.

Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.

SoundScriber Corp., 146 Munson St., New Haven 4, Conn.

Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.

Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.

Zephyr Products Co., 129 E. 124th St., New York 35, N. Y.

TAPES—Insulation

See Insulation Parts

TECHNICAL BOOKS—Publishers

Academic Press Inc., 125 E. 23rd St., New York 10, N. Y.

American Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y.

American Institute of Electrical Engineers, 33 W. 39th St., New York, N. Y.

American Radio Relay League, West Hartford, Conn.

American Standards Association, 70 E. 45th St., New York, N. Y.

Audel & Co., Theodore, 49 W. 23rd St., New York, N. Y.

Bernards Publishers Ltd., The Gramplans, Western Gate, London W. 6, England.

Blakiston Co., 1012 Walnut St., Philadelphia 5, Pa.

Boyce-Roche Book Co., 460 Bloomfield Ave., Montclair, N. J.

Chapman & Hall Ltd., 37 Essex St., London, W. C. 2, England.

Day Co. Inc., John, 62 W. 45th St., New York, N. Y.

Dover Publications Inc., 1780 Broadway, New York, N. Y.

Editors and Engineers Ltd., Santa Barbara, Calif.

Electronics Research Publishing Co., Inc., 480 Canal St., New York 13, N. Y.

Elsevier Publishing Co., Inc., 215 Fourth Ave., New York, N. Y.

Engineers Council for Professional Development, 29 W. 39th St., New York, N. Y.

Federal Telephone & Radio Corp., Publication Dept., 6 Broad St., New York 4, N. Y.

Harper & Brothers, 49 E. 33rd St., New York, N. Y.

Industrial Research Service, Dover, N. H.

Institute of Radio Engineers, Inc., 1 E. 79th St., New York, N. Y.

International Publishers Co., 381 Fourth Ave., New York, N. Y.

Interscience Publishers Inc., 215 Fourth Ave., New York 3, N. Y.

Irwin Inc., Richard D., 3201 S. Michigan Ave., Chicago 16, Ill.

MacMillan Co., The, 60 Fifth Ave., New York 11, N. Y.

MCGRAW-HILL BOOK COMPANY, INC., 330 W. 42nd St., New York 36, N. Y. ADV. PG. 410, 478, 538, 560, 596, 612.

Maedel Publishing House, 593 East 38th St., Brooklyn 3, N. Y.

National Bureau of Standards, Washington, D. C.

Nelson & Sons, Thomas, 385 Madison Ave., New York, N. Y.

Oxford University Press, 114 Fifth Ave., New York, N. Y.

Philips Gloeilampenfabrieken, N. V., Eindhoven, The Netherlands.

Philosophical Library, Publishers, 15 E. 40th St., New York 16, N. Y.

Pitman Publishing Corp., 2 W. 45th St., New York, N. Y.

Prentice-Hall Inc., 70 Fifth Ave., New York, N. Y.

Princeton University Press, Princeton, N. J.

Radcraft Publications Inc., 25 W. Broadway, New York, N. Y.

Radio Corporation of America, R C A Laboratories Div., Princeton, N. J.

Radio Corporation of America, Tube Dept., Harrison, N. J.

Rider Publications Inc., John F., 480 Canal St., New York 13, N. Y.

Rinehart Books Inc., 232 Madison Ave., New York 16, N. Y.

Ronald Press Co., The, 15 E. 26th St., New York 10, N. Y.

Sams Co. Inc., Howard W., 2201 E. 46th St., Indianapolis 5, Ind.

Stechert-Hafner Inc., 31 East 10th St., New York, N. Y.

United Catalog Publishers Inc., 106-110 Lafayette St., New York 13, N. Y.

Universal Scientific Co. Inc., Vincennes, Ind.

University of Chicago Press, The, Chicago, Ill.

VanNostrand Co., Inc., D., 250 Fourth Ave., New York 3, N. Y.

Wiley & Sons Inc., John, 440 Fourth Ave., New York, N. Y.

SWITCHES—Transformer

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Cutler-Hammer, Inc., 411 North 12th St., Milwaukee 1, Wis.

Hetherington, Inc., Sharon Hill, Pa.

J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.

SWITCHES—Vacuum

Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.

CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.

Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.

Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.

Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

EITEL-McCULLOUGH INC., San Bruno, Calif. ADV. PG. 378, 379.

Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

TEES—Microwave

See Microwave Accessories

Hybrid Junctions—Microwave

TELEMETERING SYSTEMS—Electronic

AIR ASSOCIATES, INC., Teterboro, N. Y. ADV. PG. 329.

APPLIED SCIENCE CORP. OF PRINCETON, THE, P. O. Box 44, Princeton, N. J. ADV. PG. 386.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.

BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.

BURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.

Bristol Co., The, Waterbury 20, Conn.

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Diamond Power Specialty Corp., Lancaster, Ohio.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.

Edico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Electro-Mechanical Research, Inc., Ridgefield, Conn.

Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.

Farmers Engineering & Mfg. Co., Irwin, Pa.

FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.

Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.

Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.

HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 164-167.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.

Kaye-Halbert Corp., 3555 Hayden Ave., Culver City, Calif.

PANORAMIC RADIO PRODUCTS, INC., 10 S. Second St., Mt. Vernon, N. Y. ADV. PG. 624.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.

Rosen Engineering Products, Inc., Raymond, 32nd & Walnut Sts., Philadelphia 4, Pa.

Rust Industrial Co., 608 Willow St., Manchester, N. H.

Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.

Spar Engineering & Development Inc., S & Paxson Aves., Wyncote, Pa.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.

Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.

TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 623.

Telemetry Associates, P. O. Box 6, Silver Spring, Md.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.

Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

TELEPHONES—Handsets

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.

CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Brittain St., Meriden, Conn. ADV. PG. 590.

Electro-Voice, Inc., Buchanan, Mich.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.

KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.

Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, Ill.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio.

Pacific Electricord Co., P. O. Box 15805, Cranshaw Sta., Los Angeles 8, Calif.

Phillimore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 228, 302.

Sears Co., M. J., Delaware County, Roxbury, N. Y.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Stromberg-Carlson Co., Rochester 3, N. Y.

TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 600.

U. S. Instrument Corp., 409 Broad St., Summit, N. J.

TELEPHONES—Handsets, Sound Powered

Sears Co., M. J., Delaware County, Roxbury, N. Y.

U. S. Instrument Corp., 409 Broad St., Summit, N. J.

WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346.

TELEVISION MASKS

See Masks, Television

TELEVISION PROJECTION SCREENS

See Screens, Television Projection

TEMPERATURE

See Indicators

TENSIONS—Coil Winding

COIL WINDING EQUIPMENT CO., 109 Audrey Ave., Oyster Bay, N. Y. ADV. PG. 218.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

TERMINAL BLOCKS

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio.

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 29, Hillside, N. J. ADV. PG. 442, 443.

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.

Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.

Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.

Cutler-Hammer, Inc., 411 North 12th St., Milwaukee 1, Wis.

DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 370, 371.

EBY INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.

Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.

ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.

Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.

HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.

IlSCO Copper Tube & Products, Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.

Jowill Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.

LENKURT ELECTRIC CO., INC., 1113 County Road, San Carlos, Calif. ADV. PG. 540.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Mica Insulator Co., Schenectady 1, N. Y.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Molding Corp. of America, 40 Church St., Pawtucket, R. I.

Moore Co., Howard J., 266 William St., New York 38, N. Y.

MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.

Northeastern Engineering Inc., Manchester, N. H.

North Electric Mfg. Co., 501 S. Market St., Gallion, Ohio.

Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.

P. M. Industries Inc., Stamford, Conn.

Pfizer Products, 3901 W. 54th St., Los Angeles, Calif.

Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.

RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.

Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.

Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.

Sittler Corp., 18 N. Ada St., Chicago 7, Ill.

Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Square D Co., 4041 N. Richards, Milwaukee 12, Wis.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

States Co., 19 New Park Ave., Hartford 6, Conn.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.

Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Telectro Industries Corp., 35-18 37th St., Long Island City, N. Y.

THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.

Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.

U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

U. S. Instrument Corp., 409 Broad St., Summit, N. J.

Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

TERMINAL BOARDS

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio.

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.

Bliss Electronics Corp., Box 123, Sussex, N. J.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 29, Hillside, N. J. ADV. PG. 442, 443.

Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.

Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.

Custom Electronics Corp., Morris Plains, N. J.

DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 370, 371.

DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.

Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.

EBY INC., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.

ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.

FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.
HELDOR MFG. CO., DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 532.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 450.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
 National Ceramic Co., 400 Southard St., Trenton 2, N. J.
NATIONAL TEL-TRONICS CORP., 35 St. Caspary Ave., Yonkers, N. Y. ADV. PG. 332.
 Northfield Linden Corp., 147 Ocean Ave., Lynbrook, N. Y.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 569.
 P. M. Industries, Inc., Stamford, Conn.
 Pfefer Products, 3901 W. 54th St., Los Angeles, Calif.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
PRECISION METAL PRODUCTS CO. OF MALDEN, 41 Elm St., Stoneham 80, Mass. ADV. PG. 475.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.
 Shaw Insulator Co., 160 Coit St., Irvington 11, N. J.
 Shore Engineering Inc., 232 West Ave., Long Branch, N. J.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 States Co., 19 New Park Ave., Hartford 6, Conn.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Telectro Industries Corp., 35-18 37th St., Long Island City, N. Y.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 398.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.
 Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.

TERMINAL STRIPS

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 No. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
BIRNBACH RADIO CO., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.

Bliss Electronic Corp., Box 123, Sussex, N. J.
 Brach Mfg. Co., 200 Central Ave., Newark 4, N. J.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 29, Hillside, N. J. ADV. PG. 442, 443.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
CONTINENTAL DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
 Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 370, 371.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
EBY, INC., HUGH H., 2700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 523.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 235.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 532.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Kulka Electric Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
MYCALEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293.
NATIONAL TEL-TRONICS CORP., 35 St. Caspary Ave., Yonkers, N. Y. ADV. PG. 332.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Northfield Linden Corp., 147 Ocean Ave., Lynbrook, N. Y.
 P. M. Industries, Inc., Stamford, Conn.
 Pfefer Products, 3901 W. 54th St., Los Angeles, Calif.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 81.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
PRECISION METAL PRODUCTS CO. OF MALDEN, 41 Elm St., Stoneham 80, Mass. ADV. PG. 475.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Rogers Corp., Manchester, Conn.
 Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Shore Engineering Inc., 232 West Ave., Long Branch, N. J.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London W.C. 2, England.
 States Co., 19 New Park Ave., Hartford 6, Conn.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
UNITED CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 399.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.

U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

TERMINALS

(h) Indicates hermetically sealed types.

Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Aircraft Marine Products, Inc., 2100 Paxton St., Hamburg 10, Pa.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
AMERICAN BRASS CO., 414 Meadow St., Watertown 20, Conn. ADV. PG. 433.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
BEAD CHAIN MANUFACTURING CO., 110 Mount Grove St., Bridgeport 5, Conn. ADV. PG. 521.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Brihart Plastics Corp., Old Country Rd., Mineola, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 29, Hillside, N. J. ADV. PG. 442, 443.
 Burndy Engineering Co., Inc., Norwalk, Conn.
 Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Dante Electric Mfg. Co., Bantam, Conn.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 370, 371.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, Long Island City, N. Y.
 Eastern Specialty Co., Philadelphia 40, Pa.
ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 4, N. J. ADV. PG. 135.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
 Frankel Connector Co., 27 Vestry St., New York, N. Y.
FUSITE CORP., 6000 Fernview Ave., Cincinnati 10, Ohio. ADV. PG. 227.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 609.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.
GLASS SOLDER ENGINEERING, 845 El Centro South Pasadena, Calif. ADV. PG. 572.
HELDOR MFG. CO., DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.
HERMASEAL CO., INC., Riverside Drive, Elkhart, Ind. ADV. PG. 390, 391.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 235.
 Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 532.
 Industrial Products Co., Danbury, Conn.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
INTERNATIONAL RESISTANCE CO., 401 N. Broad Philadelphia 8, Pa. ADV. PG. 175-178.
IPPOLITO & CO., INC., JAMES, 401 Concord Ave., Bronx 54, N. Y. ADV. PG. 320.
 Isolantite Mfg. Corp., Stirling, N. J.
 Javex, P. O. Box 646, Redlands, Calif.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 407.
JOHNSON & HOFFMAN MFG. CO., 31 E. Second Mineola, N. Y. ADV. PG. 358, 359.
JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 200, 201.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Kolton Electric Mfg. Co., 123 New Jersey Rail Ave., Newark 5, N. J.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
LUNDEY ASSOCIATES, 694 Main St., Waltham 1, Mass. ADV. PG. 372.
LYNN ELECTRONIC RESEARCH CO., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 384.
 McCormick-Selph Associates, Palo Alto Airport, Alto, Calif.

agna Electronics Co., 9810 Anza Ave., P. O. Box 338, Longwood, Calif.

ALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, Ill. ADV. PG. 571.

Almond Corp., 2608 W. 16th St., Chicago 8, Ill.

Amshel Associates, Inc., John, Box 2463, Bridgeport 8, Conn.

ANTHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 450.

Arta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.

Armen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Armed Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Armstrong Corp. of America, 40 Church St., Pawtucket, R. I.

Arroyo Co., Howard J., 266 William St., New York 38, N. Y.

Arroyo Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.

ARVLEX CORPORATION OF AMERICA, Clifton Blvd., Clifton, N. J. ADV. PG. 292, 293. (h)

ARVON CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.

ARVON TEL-FRONS CORP., 35 St. Casimirs Ave., Yonkers, N. Y. ADV. PG. 332.

Arvo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.

Arvid Lindén Corp., 147 Ocean Ave., Lynbrook, N. Y.

Arvid Electricord Co., P. O. Box 15805, Cranshaw Sta., Los Angeles 8, Calif.

ARVON-MAGUYER CO., 17 Virginia Ave., Providence 5, R. I. ADV. PG. 594.

ARVON MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.

ARVON METAL PRODUCTS CO. OF MALDEN, 41 Elm St., Stoneham 80, Mass. ADV. PG. 475.

ARVON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.

Arvid Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.

Arvid Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.

Arvid Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

ARVON CORP., 186 Union Ave., New Rochelle, N. Y. ADV. PG. 605. (h)

ARVON CO., 9701 Reading Road, Cincinnati 15, Ohio. ADV. PG. 217. (h)

Arvidproof, Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.

Arvid Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. Y.

ARVON MFG. CO., H. B., 22 Barney St., Battle Creek, Mich. ADV. PG. 529.

Arvid Engineering Inc., 232 West Ave., Long Branch, N. J.

Arvid, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.

Arvid Products Corp., 9555 Soreng Ave., Schiller Park, Ill.

ARVON CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 626. (h)

Arvid Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.

Arvidson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.

Arvid City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

ARVON CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250. (h)

ARVONIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660. (h)

Arvid Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

Arvidson-Bremer & Co., 1644 W. Hubbard St., Chicago 22, Ill.

ARVON ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583. (h)

ARVON TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)

Arvid Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.

Arvid Engineering Co., 521 Commercial St., Glendale 3, Calif.

ARVON GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531. (h)

Arvid Corp., 6325 Gullford Ave., Box 6048, Indianapolis 20, Ind.

Arvid Electric Products Co., 400 Jacob St., Sturgis, Mich.

Arvid Co., T. C., Electronic Div., Millville, N. J.

Arvid Cable Corp., Kansas City 16, Mo.

HITSO, INC., 2037 Churchill St., Chicago 47, Ill. ADV. PG. 169.

ARVON ELECTRONICS INC., 15 Crescent Rd., Glenbrook, Conn. ADV. PG. 174.

Arvid Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

Arvid Hepp Associates, Inc., 138 West St., South Hackensack, N. J.

Arvid Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

ARVONALS—Solderless

ARVONITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.

Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

Burndy Engineering Co., Inc., Norwalk, Conn.

Dante Electric Mfg. Co., Bantam, Conn.

FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.

General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.

HELDOR MFG. CO., DIV. OF HELDOR BUSHING & TERMINAL CO., INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 294.

HEYMAN MFG. CO., Kenilworth 2, N. J. ADV. PG. 554.

HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.

Ilisco Copper Tube & Products Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.

Javex, P. O. Box 646, Redlands, Calif.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, Ill. ADV. PG. 571.

Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

SHERMAN MFG. CO., H. B., 22 Barney St., Battle Creek, Mich. ADV. PG. 529.

Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.

Thomas & Betts Co., 36 Butler St., Elizabeth 1, N. J.

Vaco Products Co., 317 E. Ontario St., Chicago 11, Ill.

Whitaker Cable Corp., Kansas City 16, Mo.

TERMINATIONS—Microwave

See Microwave Accessories

TEST CHAMBERS

See Chambers, Test

TESTERS—Automatic Tube

Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Manson Laboratories, 207 Greenwich Ave., Stamford, Conn.

Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.

Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

TESTERS—Battery

American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.

Cable Electric Products Co., Providence, R. I.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

HEATH CO., Benton Harbor, Mich. ADV. PG. 486.

Hever Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.

King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.

Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.

McCollin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.

RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.

Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif.

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 576.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.

STERLING MFG. CO., 1201 Wentworth, Cleveland, Ohio. ADV. PG. 527.

Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.

Supreme, Inc., Box E-552, Greenwood, Miss.

Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

TESTERS—Capacitor

Bliss Electronic Corp., Box 123, Sussex, N. J.

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.

Carlson & Nicholson, Inc., 497 Maynard Drive, Buffalo 21, N. Y.

Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.

Cornell-Dubilier Electric Corp., South Plainfield, N. J.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.

HEATH CO., Benton Harbor, Mich. ADV. PG. 486.

Hever Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.

Hivolt Ltd., 34A Pottery Lane, London W, 11, England.

KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.

King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.

Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

TESTERS—Cathode Tube

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.

CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 568.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.

HEATH CO., Benton Harbor, Mich. ADV. PG. 486.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.

NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.

Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.

New York 60, N. Y.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.

Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 29, N. Y. ADV. PG. 295, Inside Back & Back Covers.

Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Pa.

Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.

TESTERS—Circuit

Bliss Electronic Corp., Box 123, Sussex, N. J.

Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.

Cable Electric Products Co., Providence, R. I.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.

El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

Epco Electronics, 140 Liberty St., New York, N. Y.

FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Fordham Mfg. Co., 2220 Pearsall Ave., New York 69, N. Y.

Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
 Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Ideal Industries, Inc., Park & Borden Aves., Sycamore, Ill.
 Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Precision Electronics, 643 Milwaukee Ave., Chicago 22, Ill.
 Radar Engineers, 110 University St., Seattle, Wash.
RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
ROLLER-SMITH CORPORATION, Bethlehem, Pa. ADV. PG. 118.
SEALTRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
 Senn Corp., New Augusta, Ind.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Superior Instrument Co., 227 Fulton St., New York, N. Y.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

TESTERS—Coating Thickness

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 502.
 Dice Co., J. W., Englewood, N. J.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Magnaflex Corp., 5900 Northwest Hwy., Chicago 31, Ill.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Universal Aviation Equipment, Inc., 187 Lafayette St., New York 13, N. Y.

TESTERS—Color Infra Red

Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 20, N. Y.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Perkin-Elmer Corp., The Main Ave., Norwalk, Conn.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.

TESTERS—Continuity

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Dante Electric Mfg. Co., Bantam, Conn.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
 Federal Engineering Co., 37 Murray St., New York 7, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Ideal Industries, Inc., Park & Borden Aves., Sycamore, Ill.
 Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
 Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 614.
 Philco Corp., Accessory Div., A & A/Jegheny Ave., Philadelphia 34, Pa.
RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.
 Special Products Co., Silver Spring, Md.
 Superior Instrument Co., 227 Fulton St., New York, N. Y.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

TESTERS—Crystal Testing

Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
BERKELEY SCIENTIFIC CORP., Richmond, Calif. ADV. PG. 137.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
 Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.
 Dunn Engineering Associates, Inc., 11 Windsor St., Cambridge 39, Mass.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 110.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
 Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 512.
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 287.
 Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass.

TESTERS—Distortion

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 79.
EMPIRE DEVICES, INC., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 395.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.

TESTERS—Inductance

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 187.
 Carlson & Nicholson, Inc., 497 Maynard Drive, Buffalo 21, N. Y.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
KARTRON, INC., Box 472, Huntington Beach, Calif. ADV. PG. 628.
 King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

TESTERS—Insulation

Airmec Laboratories, Ltd., High Wycombe, Buckinghamshire, England.
 Associated Research, Inc., 3758 W. Belmont Ave., Chicago 18, Ill.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Central Research Laboratories, Inc., Red Wing, Minn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COMMUNICATION MEASUREMENTS LAB., INC., 350 Leland Ave., Plainfield, N. J. ADV. PG. 524.

Dice Co., J. W., Englewood, N. J.
 Eastern Specialty Co., Philadelphia 40, Pa.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Entwistle Co., James L., P. O. Box 176, Providence 2, R. I.
 Epco Electronics, 140 Liberty St., New York, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Hivolt Ltd., 34A Pottery Lane, London W. 11, England.
 Holtzer-Cabot, Div. of National Pneumatic Co., Inc., 12 Amory St., Boston 19, Mass.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
 Industrial Transformer Co., Gouldsboro, Pa.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 Lyman Electronic Corp., 12 Cass St., Springfield, Mass.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 614.
SEALTRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 35.
 Southwestern Industrial Electronics Co., 2831 Post Office Rd., P. O. Box 13058, Houston 19, Texas.
STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.
 Takk Corp., Newark, Ohio.
 Tensor Electric Development Co., Inc., 343 Classon Ave., Brooklyn 5, N. Y.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

TESTERS—Meter

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COMPUTER CORP. OF AMERICA, 149 Church St., New York, N. Y. ADV. PG. 594.
 Espy Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.
 Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 512.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Pottery St., Cambridge 42, Mass. ADV. PG. 592.
 States Co., 19 New Park Ave., Hartford 6, Conn.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

**TESTERS—Microwave Testing Equipment
See Microwave Accessories****TESTERS—Moisture Detection, Electronic**

BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Port St., Bristol 1, Pa. ADV. PG. 547.
 Hart Moisture Gauges, Inc., 126 Liberty St., New York 6, N. Y.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

TESTERS—Multitesters

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 546.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.

Epo Electronics, 140 Liberty St., New York, N. Y.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

HEATH CO., Benton Harbor, Mich. ADV. PG. 486.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.

Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.

Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.

INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 563.

Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.

Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Superior Instrument Co., 227 Fulton St., New York 7, N. Y.

Supreme, Inc., Box E-552, Greenwood, Miss.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

TESTERS—Synchro Error

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.

Doelcam Corp., 56 Elmwood St., Newton 58, Mass.

KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.

KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 159.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.

TESTERS—Transconductance Tube

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.

MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.

Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.

RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.

Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

Superior Instrument Co., 227 Fulton St., New York 7, N. Y.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

TESTERS—Transistor

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Dunn Engineering Associates, Inc., 11 Windsor St., Cambridge 39, Mass.

Electronic Research Associates, Box 29, Caldwell, N. J.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.

Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.

Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Pa.

Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass.

TESTERS—Vacuum Tube

Bendix Aviation Corp., 203 W. Third St., Cincinnati 2, Ohio.

CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.

DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.

ELECTRONIC INSTRUMENT CO., INC., 84 Withers St., Brooklyn 11, N. Y. ADV. PG. 349.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.

GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 568.

HEATH CO., Benton Harbor, Mich. ADV. PG. 486.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 89.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.

MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 285.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

RADIO CITY PRODUCTS CO., INC., 152 W. 25th St., New York 1, N. Y. ADV. PG. 541.

Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Sorensen Industrial Electronic Co., 87 N. Day St., Orange, N. J.

Supreme, Inc., Box E-552, Greenwood, Miss.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.

WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 350.

THERMISTORS

See also **Crystal Mounts & Mixers**

CARBOLOY DEPT. OF GENERAL ELECTRIC CO., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 20.

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.

Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

Keystone Carbon Co., Inc., St. Marys, Pa.

MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 160, 609.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

THERMOCOUPLES

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.

American Thermo Electric Co., 198-11 Hollis Ave., Hollis 12, N. Y.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Bristol Co., The, Waterbury 20, Conn.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.

Dyna Labs., Inc., 1075 Stewart Ave., Garden City, N. Y.

ELECTRO-TECH EQUIPMENT CO., 55 Lispenard St., New York 13, N. Y. ADV. PG. 522.

Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 20, N. Y.

Foxboro Co., The, Foxboro, Mass.

General Controls Co., Glendale 1, Calif.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.

Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.

Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.

Kanthal Corp., Amelia Pl., Stamford, Conn.

Manufacturers Engineering & Equipment Co., York & Mill Roads, Hatboro, Pa.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

Perkin-Elmer Corp., The, Main Ave., Norwalk, Conn.

Precision Tube Co., Inc., North Wales, Pa.

RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 592.

Reeder & Co., Charles M., 171 Victor Ave., Detroit 3, Mich.

Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.

SENSITIVE RESEARCH INSTRUMENT CORPORATION, 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Taco West Corp., 525 N. Noble St., Chicago 22, Ill.

Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.

THERMOCOUPLES—Pyrometric

Bristol Co., The, Waterbury 20, Conn.

Co-design Corp., 751 Main St., Winchester, Mass.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

ELECTRO-TECH EQUIPMENT CO., 55 Lispenard St., New York 13, N. Y. ADV. PG. 522.

Foxboro Co., The, Foxboro, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.

Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

Taco West Corp., 525 N. Noble St., Chicago 22, Ill.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

THERMOMETERS—Resistance

AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.

Bristol Co., The, Waterbury 20, Conn.

Foxboro Co., The, Foxboro, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

Macdonald Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.

PRECISION RESISTOR CO., 334 Badger Ave., Newark 8, N. J. ADV. PG. 330.

Ruge-de Forest, Inc., 84 Massachusetts Ave., Cambridge 39, Mass.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. ADV. PG. 604.

Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

THERMOPILES

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.

Bristol Co., The, Waterbury 20, Conn.

Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.

Eppley Lab., Inc., The, Newport, R. I.

Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.

Gaertner Scientific Corp., 1239 Wrightwood Ave., Chicago 14, Ill.

Illinois Testing Labs., Inc., 420 N. LaSalle St., Chicago 10, Ill.

Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.

Perkin-Elmer Corp., The, Main Ave., Norwalk, Conn.

Reeder & Co., Charles M., 171 Victor Ave., Detroit 3, Mich.

THERMOSTATS—Bimetal

STEVENS MFG. CO., INC., 69 S. Walnut St., Mansfield, Ohio. ADV. PG. 314.

THERMOSTATS—Electronic

See also **Controls, Temperature**

BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.

Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. ADV. PG. 340.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
ULANET CO., GEORGE, 413 Market St., Newark 5, N. J. ADV. PG. 562.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60.
 Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

THYRATRONS

See Tubes

TIMERS—Automatic Cycle

Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Automatic Signal Division, Eastern Industries, Inc., 100 Regent St., East Norwalk, Conn.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
BRISTOL MOTOR DIVISION, VOCALINE COMPANY OF AMERICA, INC., Old Saybrook, Conn. ADV. PG. 279.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Deitz Co., S. J., 38 River Rd., River Edge, N. J.
 Eagle Signal Corp., Moline, Illinois.
 Electronic Processes Corp., 1021 San Antonio Road, Los Altos, Calif.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 314.
 Foxboro Co., The, Foxboro, Mass.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
 Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 208, 209.
 Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
 Ingraham Co., E., Bristol, Conn.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
 Paragon Electric Co., Two Rivers, Wis.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Timetrol Co., 2919 Gladstone Ave., Rockford, Ill.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
 Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Automatic Interval

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 546.
 Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
BRISTOL MOTOR DIVISION, VOCALINE COMPANY OF AMERICA, INC., Old Saybrook, Conn. ADV. PG. 279.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Deitz Co., S. J., 38 River Rd., River Edge, N. J.
 Dimco-Gray Co., 207 E. Sixth St., Dayton 2, Ohio.
 Eagle Signal Corp., Moline, Ill.
 Foxboro Co., The, Foxboro, Mass.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.

Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Gorrell & Gorrell, Haworth, N. J.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 208, 209.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
 Ingraham Co., E., Bristol, Conn.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
 Paragon Electric Co., Two Rivers, Wis.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Product Associates, Inc., 318 W. Olympic Blvd., Los Angeles, Calif.
 Reliance Automatic Lighting Co., 1919 Mead St., Racine, Wis.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Walser Automatic Timer Corp., Graybar Bldg., New York 17, N. Y.
 Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Automatic Reset

ADAMS & WESTLAKE CO., Michigan St., Elkhart, Ind. ADV. PG. 103-106.
 Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W. Box 13, Centerbrook, Conn. ADV. PG. 143.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Deitz Co., S. J., 38 River Rd., River Edge, N. J.
 Eagle Signal Corp., Moline, Illinois.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 208, 209.
 Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 Paragon Electric Co., Two Rivers, Wisconsin.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Quaker City Gear Works, Red Lion & Philmont Rd., Bethayres, Pa.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Special Instruments Lab., Inc., 1003 Highland Ave., Knoxville, Tenn.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Struthers-Dunn, Inc., 150 N. 13th St., Philadelphia 7, Pa.
 Timetrol Co., 2919 Gladstone Ave., Rockford, Ill.
ULANET CO., GEORGE, 413 Market St., Newark 5, N. J. ADV. PG. 562.

Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Electronic

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
AMERICAN CHRONOSCOPE CORP., 316 West First St., Mt. Vernon, N. Y. ADV. PG. 546.
AMERICAN ELECTRONIC LABS., INC., 641 Arch St., Philadelphia 6, Pa. ADV. PG. 528.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BERKELEY SCIENTIFIC CO., Richmond, Calif. ADV. PG. 137.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Clary Multiplier Corp., San Gabriel, Calif.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Detron Co., 5631 Cahuenga Blvd., North Hollywood, Calif.
 Eagle Signal Corp., Moline, Ill.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 314.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
 Hycqn. Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
 Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 614.
 Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Special Instruments Labs., Inc., 1003 Highland Ave., Knoxville, Tenn.
STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Timetrol Co., 2919 Gladstone Ave., Rockford, Ill.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
 Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.
 Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

TIMERS—Hour Counting

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRISTOL MOTOR DIVISION, VOCALINE COMPANY OF AMERICA, INC., Old Saybrook, Conn. ADV. PG. 279.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
 Eagle Signal Corp., Moline, Ill.
 Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 208, 209.
 Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 449.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
Modes, Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.

TIMERS—Impulse

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bristol Co., The, Waterbury 20, Conn.
Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
CRAMER CO. INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
Eagle Signal Corp., Moline, Ill.
Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
States Radio Co., Quincy, Ill.
Walsler-Steers Corp., 2 Main St., Belleville 9, N. J.
Gorrell & Gorrell, Haworth, N. J.
Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
Stromberg-Carlson Co., Rochester 3, N. Y.
Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.
Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Inertia

Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.

TIMERS—Motor Operated

Anglo Corp., 2037 W. Division St., Chicago 22, Ill.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
Bristol Co., The, Waterbury 20, Conn.
BRISTOL MOTOR DIVISION, VOCALINE COMPANY OF AMERICA, INC., Old Saybrook, Conn. ADV. PG. 279.
Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
Eagle Signal Corp., Moline, Illinois.
Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Gorrell & Gorrell, Haworth, N. J.
Hagen Mfg. Co., Inc., Baraboo, Wis.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 208, 209.
HUGHEY & PHILLIPS, P. O. Box 686, Encino, Calif. ADV. PG. 254.
Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
Ingramham Co., E., Bristol, Conn.
Leibel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 472.
Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
Nucleonic Company of America, 497 Union St., Brooklyn 31, N. Y.
Paragon Electric Co., Two Rivers, Wisconsin.
Reliance Automatic Lighting Co., 1919 Mead St., Racine, Wis.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
SESSIONS CLOCK CO., Forestville, Conn. ADV. PG. 459.
Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
Special Instruments Lab., Inc., 1003 Highland Ave., Knoxville, Tenn.
Stromberg-Carlson Co., Rochester 3, N. Y.
Struthers-Dunn, Inc., 150 N. 13th St., Philadelphia 7, Pa.
Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
TELECHRON DEPT. OF GENERAL ELECTRIC CO., Ashland, Mass. ADV. PG. 19.
Vocaline Company of America, Inc., Old Saybrook, Conn.
Zenith Electric Co., 152 W. Walnut St., Chicago 10, Ill.

TIMERS—Multicontact

Anglo Corp., 2037 W. Division St., Chicago 22, Ill.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
Bristol Co., The, Waterbury 20, Conn.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
Eagle Signal Corp., Moline, Illinois.
Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 208, 209.
Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
Walsler Automatic Timer Corp., Graybar Bldg., New York 17, N. Y.
Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

TIMERS—Percentage

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
Eagle Signal Corp., Moline, Illinois.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
Paragon Electric Co., Two Rivers, Wis.
Timetrol Co., 2919 Gladstone Ave., Rockford, Ill.
Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.

TIMERS—Photoelectric

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 546.
Autotron Co., Danville, Ill.
Carlson & Nicholson, Inc., 497 Maynard Drive, Buffalo 21, N. Y.
Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Deitz Co., S. J., River Rd., River Edge, N. J.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Haledy Electronics Co., 57 William St., New York 5, N. Y.
Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.

TIMERS—Sequence

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
Bristol Co., The, Waterbury 20, Conn.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 143.
Eagle Signal Corp., Moline, Ill.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 314.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 584 Elm St., Torrington, Conn. ADV. PG. 208, 209.
Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
Paragon Electric Co., Two Rivers, Wisconsin.
Potter Instrument Co., Inc., 115 Cutter Mill Rd., Great Neck, N. Y.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
Walsler Automatic Timer Corp., Graybar Bldg., New York 17, N. Y.
Weltronic Co., 19500 West Eight Mile Rd., Detroit 19, Mich.
Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Thermal

Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
EDISON, INC., THOMAS A., INSTRUMENT DIV., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 300, 301.
G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. ADV. PG. 340.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
STEVENS MFG. CO., INC., 69 S. Walnut St., Mansfield, Ohio. ADV. PG. 314.
Struthers-Dunn, Inc., 150 N. 13th St., Philadelphia 7, Pa.
ULANET CO., GEORGE, 413 Market St., Newark 5, N. J. ADV. PG. 562.

TIMERS—Welding, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
Electronic Processes Corp., 1021 San Antonio Road, Los Altos, Calif.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 314.
Federal Tool Engineering Co., 1386 Pompton Ave., Cedar Grove, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 614.
Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 603.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
Weltronic Co., 19500 West Eight Mile Road, Detroit 19, Mich.

TIMING

See Controls, Timing

TINNING—Hot Dipped

Hopwood Retinning Co., Inc., 198 Pacific Ave., Jersey City, N. J.
Hopwood Retinning Corp., 303 Commercial St., Malden, Mass.

TITRATION APPARATUS—Electronic

Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

TOOLS—Acetylene Soldering

Linde Air Products Co., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.

TOOLS—Hand or Mechanical

Note: Includes grinders, pliers, punches, screwdrivers, wrenches, etc. For further particulars, consult advertisement of manufacturer in this issue.

Air-Mite, 4417 W. Carroll Ave., Chicago 24, Ill.
Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.

Alpha Electronics, Inc., Route #17, Ramsey, N. J.
 Apco Mossberg Co., Attleboro, Mass.
 Chicago Tool & Engineering Co., 8380 S. Chicago Ave., Chicago 17, Ill.
 Dremel Mfg. Co., 2300 18th St., Racine, Wis.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
HENKEL-CLAUSS CO., Fremont, Ohio. ADV. PG. 315.
 Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Klein & Sons, Mathias, 3200 Belmont Ave., Chicago 18, Ill.
 Magna Driver Corp., 779 Washington St., Buffalo 3, N. Y.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
 Millen Mfg. Co., 90 Summit Ave., Brookline, Mass.
 Moody Machine Products Co., Inc., 53 Dudley St., Providence 5, R. I.
 Pioneer Tool Co., 5008 W. Jefferson Blvd., Los Angeles, Calif.
PRECISE MEASUREMENTS CO., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 502.
 Sargent & Co., New Haven 9, Conn.
 Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.
 Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 564.
 Sturtevant Co., P. A., Addison, Ill.
 Technical Service Corp., 3116 Michigan Drive, Louisville 5, Ky.
 Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.
 Vaco Products Co., 317 E. Ontario St., Chicago 11, Ill.
 Wilton Tool Mfg. Co., 925 Wrightwood Ave., Chicago 14, Ill.
 Xcelite, Inc., 28 Bank St., Orchard Park, N. Y.

TOOLS—Resistance Soldering

Cole Radio Works, 86 Westville Ave., Caldwell, N. J.
 Ideal Industries, Inc., Park & Borden Aves., Sycamore, Ill.
 Luma Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio.
 Wall Mfg. Co., Grove City, Pa.
WASSERLEIN MFG. CO., INC., 126 Cass St., Joliet, Ill. ADV. PG. 586.

TOOLS—Rubberized Abrasive

Cratex Mfg. Co., 81 Natoma St., San Francisco 5, Calif.

TOURMALINE

See Crystals

TOWER SERVICE—Installers, Erectors, Maintainers

Blaw-Knox Tower Div., Blaw-Knox, Inc., Pittsburgh, Pa.
ELECTRICAL TOWER SERVICE, INC., 206 S. Washington St., Peoria, Ill. ADV. PG. 72.
 Stainless, Inc., Third St., North Wales, Pa.

TRACERS—Manual, for Oscilloscopes

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.

TRACERS—Signal

See Instruments—Electrical Measuring

TRANSCIVERS—Aviation

Acme Electronix Div., NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Northeastern Engineering Inc., Manchester, N. H.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

TRANSCIVERS—Lifeboat

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.

PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 566.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

TRANSCIVERS—Portable

Acme Electronix Div., NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
 Communications Co., Inc., 3000 Greco Ave., Coral Gables 34, Fla.
 Condor Radio Mfg. Co., 2705 S. Kramer Ave., Tucson, Ariz.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Northeastern Engineering Inc., Manchester, N. H.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 566.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Stockman Electronics Research Co., 543 Lexington St., Waltham 54, Mass.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

TRANSCIVERS—uhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

TRANSCIVERS—vhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Condor Radio Mfg. Co., 2705 S. Kramer Ave., Tucson, Ariz.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W.C. 2, England.
 Schuttig & Co., Inc., 9th & Kearney Sts., N.E., Washington 17, D. C.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

TRANSDUCERS

Atlantic Research Corp., 808 N. Royal St., Alexandria, Va.
AVIATION ENGINEERING CORP., 34-56 58th St., Woodside 77, N. Y. ADV. PG. 299.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bludworth Marine Div., National-Simplex-Bludworth Inc., 92 Gold St., New York 38, N. Y.
CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 467.
 Colvin Laboratories, 12 Court St., Morristown, N. J.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Doelcam Inc., 56 Elmwood St., Newton 58, Mass.
 Dyna Labs., Inc., 1075 Stewart Ave., Garden City, N. Y.
EDCLIFF INSTRUMENTS, 383 N. Foothill Blvd., Pasadena 8, Calif. ADV. PG. 589.
 Edo Corp., College Point, N. Y.

Electronic Engineering Associates, Ltd., 1048 Britton Ave., San Carlos, Calif.
 Eltron Corp., St. Anne, Ill.
 Glasscraft Co., 5210 E. Olympic Blvd., Los Angeles 2, Calif.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
 Gulton Mfg. Corp., Metuchen, N. J.
 Hansell, Inc., U. The, Westerly, R. I.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437.
 Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
 Mucon Corp., 9 St. Francis St., Newark 5, N. J.
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 3, Ill. ADV. PG. 516.
 Polytech Devices, Inc., 1180 E. Grand St., Elizabeth 1, N. J.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
SERVOMECHANISMS, INC., Post & Stewart Aves., Westbury, N. Y. ADV. PG. 426.
 Sperry Products, Inc., Danbury, Conn.
 Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
TRANS-SONICS, INC., Bedford Airport, Bedford, Mass. ADV. PG. 604.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.

TRANSFORMERS

Audio

1. Input, Output or Interstage
2. Modulator
3. Very Low Frequency

Power

4. Current Limiting
5. 400 Cycle
6. Isolation
7. Plate, Filament or Bias—Under 500 Watts
8. Plate, Filament or Bias—Over 500 Watts
9. Saturable
10. Variable
11. Vibrator
12. Voltage Regulating
13. Welding
14. X-Ray

A. C. Transformer Corp., 89 Madison St., Newark, N. J. 4-6-7-8-9-13.
A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 1, N. Y. 1-2-3-5-6-7-8-9-11. ADV. PG. 536.
ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. 1-4-5-6-7-8-9-10-11-12-13. ADV. PG. 453.
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. 1-2-6-7.
 Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 1, N. Y. 1-2-3-4-5-6-7-8-11.
 Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind. 1-2-5-6-7-11.
AIRCRAFT TRANSFORMER CORP., West & Willow Ave., Long Branch, N. J. 1-2-3-4-6-7-9-10-11-12. ADV. PG. 238.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. 1-2-3-4-5-6-7-8-9-11-14. ADV. PG. 584.
AIRPAX PRODUCTS CO., Middle River, Baltimore 1, Md. 1-2-3-4-5-6-7-8-9-11-12. ADV. PG. 119.
 Allied Mfg. Corp., 605-07 61st St., West New York 1, N. J. 7-8-10-12-13-14.
AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., Paul 11, Minn. 11. ADV. PG. 278.
AMPLIFIER CORP. OF AMERICA, 396 Broadway, New York 13, N. Y. 1-7-9-10-12. ADV. PG. 360.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury 1, Mass. 1-2-3-4-5-6-7-8-9-10-11-13-14. ADV. PG. 558.
AUDIO DEVELOPMENT CO., 2833 13th Ave., Minneapolis 7, Minn. 1-2-5-6-7-11. ADV. PG. 41.
 Automatic Mfg. Corp., 65 Gouverneur St., New York 1, N. J. 1.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y. 1.
 Best Mfg. Co., Inc., 1200 Grove St., Irvington 1, N. J. 1.
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto 1, Calif. 4-6-9-10-12-13-14.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 1, N. Y. 1-7.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 1, N. J. 5-9-13.
 Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J. 5-13.
BRACKE-SEIB X-RAY CO., INC., 293 Third Ave., New York 10, N. Y. 14. ADV. PG. 566.
 Bristol Co., The, Waterbury 20, Conn. 11.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 1-2-7.
 Cable Electric Products Co., Providence, R. I. 4.
 Carol Electronics Corp., 141 E. 25th St., New York 1, N. Y. 1-2-3-4-5-6-7-8-9.
CELCO CONSTANTINE ENGINEERING LABORATORY, CO., Island Ave., Mahwah, N. J. 1-5-7-9-12. ADV. PG. 470, 471.

- CENTRAL TRANSFORMER CO.**, 910 W. Jackson Ave., Chicago, Ill. 1-2-3-4-5-6-7-8-9-10-11-13-14. ADV. PG. 577. (h)
- Chicago Electronic Engineering Co.**, 3223 W. Armitage Ave., Chicago 47, Ill. 1-3-4-5-6-7-9-11-12-13-14. (h)
- CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP.**, 3501 Addison St., Chicago 18, Ill. 1-2-3-4-5-6-7-8-9-11. ADV. PG. 468. (h)
- COMAR ELECTRIC CO.**, 3349 W. Addison St., Chicago 18, Ill. 7-12. ADV. PG. 494. (h)
- CONNECTICUT TELEPHONE & ELECTRIC CORP.**, 70 Britannia St., Meriden, Conn. 1. ADV. PG. 590. (h)
- Consolidated Radio Products Co.**, 350 W. Erie St., Chicago 10, Ill. 1-2-3-4-5-6-7-8-9-10-11-12. (h)
- Control Corp.**, 718 Central Ave., Minneapolis 14, Minn. 6. (h)
- Cornell-Dubilier Electric Corp.**, South Plainfield, N. J. 11. (h)
- Crest Laboratories, Inc.**, 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. 1-2-3-5-6-7-9-10-11. (h)
- Crest Transformer Corp.**, 1834-36 W. North Ave., Chicago 22, Ill. 1-2-3-5-6-7-8-9-10-12-13-14. (h)
- Crittenden Transformer Co.**, 1220 Nadeau St., Los Angeles, Calif. 4-5-6-7-8-13-14. (h)
- Cycle Electronic Laboratories**, 356 Glenwood Ave., East Orange, N. J. 1-4-6-7-8. (h)
- DAMO ELECTRIC CO.**, Main St., Winsted, Conn. 12. ADV. PG. 542. (h)
- Deico Radio Div., General Motors Corp.**, Kokomo, Ind. 1-11. (h)
- DIETZ DESIGN & MFG. CO.**, Grandview 6, Mo. 1-5-7. ADV. PG. 498. (h)
- Hit-Mco, Inc.**, 729 Baltimore Ave., Kansas City 6, Mo. 1-6-7-11. (h)
- Dormeyer Industries**, 3418 N. Milwaukee Ave., Chicago 41, Ill. 1-5-6-7-8-11-13-14. (h)
- Dormitzer Electric Co., Inc.**, 5 Hadley St., Cambridge, Mass. 1-4-7-8-11. (h)
- Dyna Labs, Inc.**, 1075 Stewart Ave., Garden City, N. Y. 1. (h)
- EISLER ENGINEERING CO., INC.**, 740 S. 13th St., Newark 3, N. J. 6-8-10-13. ADV. PG. 332. (h)
- Electran Mfg. Co.**, 1901 N. Clybourn, Chicago, Ill. 6. (h)
- Electrical Windings, Inc.**, 2015 N. Kolmar Ave., Chicago 39, Ill. 1-5-6-7-8-11-14. (h)
- Electrocoil Transformer Co.**, Westerly Rd., Ossining, N. Y. 1-6-7-8-9-13-14. (h)
- Electro Engineering Works**, 6021 College Ave., Oakland 18, Calif. 8-12. (h)
- ELECTRONIC TRANSFORMER CO., INC.**, 207 W. 25th St., New York, N. Y. 1-2-3-4-5-6-7-8-9-10-11-12. ADV. PG. 428. (h)
- EMPIRE COIL CO., INC.**, Beachwood Ave. & Second St., New Rochelle, N. Y. 1-2-3-4-5-6-7-8-9-11. ADV. PG. 480. (h)
- Ensign Coil Co.**, 2516 S. Pulaski Rd., Chicago, Ill. 1-2. (h)
- EPCO PRODUCTS, INC.**, 2500 Atlantic Ave., Brooklyn 17, N. Y. 1-2-3-5-6-7-8-9-10-11-13. ADV. PG. 486. (h)
- Espey Mfg. Co., Inc.**, 528 E. 72nd St., New York 21, N. Y. 1-2-3-4-5-6-7-8-9-10-12. (h)
- FEDERAL TELEPHONE & RADIO CORP.**, 88 Kingsland Rd., Clifton, N. J. 1-2-6-7-8-9-11. ADV. PG. 148-153. (h)
- Federal Tool Engineering, Inc.**, 1386 Pompton Ave., Cedar Grove, N. J. 13. (h)
- FERRANTI ELECTRIC, INC.**, 30 Rockefeller Plaza, New York 20, N. Y. 1-2-3-4-5-6-7-8-9-11-12. ADV. PG. 225. (h)
- Foster Transformer Co., Inc.**, 3820 Colerain Ave., Cincinnati 23, Ohio. 1-2-5-7-9-11. (h)
- FREED TRANSFORMER CO., INC.**, 1736 Weirfield St., Brooklyn 27, N. Y. 1-2-3-4-5-6-7-8-9-11-13. ADV. PG. 219. (h)
- Gardner Electric Mfg. Co.**, 4227 Hollis St., Emeryville 8, Calif. 6-7-8-13-14. (h)
- General Controls Co.**, Glendale 1, Calif. 12. (h)
- GENERAL ELECTRIC CO.**, Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 2-4-5-6-7-8-9-10-11-12-13-14. ADV. PG. 1-18. (h)
- GENERAL MAGNETICS, INC.**, 135 Bloomfield Ave., Bloomfield, N. J. 9-12. ADV. PG. 251. (h)
- GENERAL RADIO CO.**, 275 Massachusetts Ave., Cambridge 39, Mass. 1-2-3-10. ADV. PG. 90, 91. (h)
- General Transformer Co.**, 18240 Harwood Ave., Homewood, Ill. 1-2-5-6-7-8-11-12. (h)
- Geotronic Labs, Inc.**, Dallas 11, Texas. 1-2-3-5-7-9. (h)
- Goodmans Industries, Ltd.**, Axiom Works, Wembley, Middlesex, England. 1. (h)
- GOSLIN ELECTRIC & MFG. CO.**, 2921 W. Olive St., Burbank, Calif. 1-2-5-6-8-9-10-11-12. ADV. PG. 618. (h)
- Grammer Transformer Corp.**, 2734 N. Pulaski Rd., Chicago 39, Ill. 1-2-3-4-5-6-7-8-9-11-12-13-14. (h)
- Hadley Co., Robert M.**, 5112 S. Hoover St., Los Angeles 37, Calif. 1-2-3-5-6-7-8-11. (h)
- Halldorson Transformer Co.**, 4500 Ravenswood Ave., Chicago 40, Ill. 1-2-3-6-7-11-12. (h)
- HIGHLAND ENGINEERING CO.**, Main St. & Urban Ave., Westbury, N. Y. 1-2-3-5-6-7-8-10-11-12. ADV. PG. 568. (h)
- Hindle Transformer Co., Inc.**, Flemington, N. J. 1-2-3-4-5-6-7-8-9-13-14. (h)
- Holl Audio Inc.**, 5014 N. Encinita Ave., Temple City, Calif. 1. (h)
- Industrial Electronics Co., Inc.**, Hanover, Mass. 5-6. (h)
- Industrial Transformer Co.**, Gouldsboro, Pa. 1-2-3-4-5-6-7-8-9-10-11-12-13-14. (h)
- Inet, Inc.**, 8655 S. Main St., Los Angeles 3, Calif. 5-12. (h)
- Jefferson Electric Co.**, Bellwood, Ill. 1. (h)
- K-V Transformer Corp.**, Danbury, Conn. 1-2-3-4-5-6-7-8-9. (h)
- KENYON TRANSFORMER CO., INC.**, 840 Barry St., New York 59, N. Y. 1-2-3-4-5-6-7-8-9-11-13. ADV. PG. 272. (h)
- KEYSTONE PRODUCTS CO.**, 904-6 23rd St., Union City, N. J. 5-7-9. ADV. PG. 493. (h)
- LABORATORY FOR ELECTRONICS, INC.**, 75 Pitts St., Boston 14, Mass. 1-2-3-5-6-7-8-9-11. ADV. PG. 38, 39. (h)
- LANGVIN MANUFACTURING CORP.**, 37 W. 65th St., New York 23, N. Y. 1-2-6-7-8-9-11. ADV. PG. 360. (h)
- Lee Electric Co.**, 132 Beckwith Ave., Patterson, N. J. 1-3-4-6-7-10-11-12. (h)
- LEONARD ELECTRIC PRODUCTS CO., INC.**, 67 Thirty Fourth St., Brooklyn 32, N. Y. 1-2-3-5-7-8-9. ADV. PG. 575. (h)
- Lynch Carrier Systems, Inc.**, 96 Jessie St., San Francisco 5, Calif. 1-2-3-4-10. (h)
- MAGNATRON, INC.**, 248 Schuyler Ave., Kearny, N. J. 1-2-3-4-6-8-9-10-12-13-14. ADV. PG. 501. (h)
- MAGNAVOX CO., THE**, Components Div., Fort Wayne 4, Ind. 1. ADV. PG. 328. (h)
- MAGNETIC AMPLIFIERS, INC.**, 632 Tinton Ave., New York 55, N. Y. 4-5-6-7-8-9-12. ADV. PG. 437. (h)
- Magnetic Research Corp.**, 318 Kansas St., El Segundo, Calif. 5-9-12. (h)
- Magnetic Windings Div., Essex Wire Corp.**, Freemansburg Ave. at Hobson Blvd., Easton, Pa. 1-2-3-5-6-7-8-14. (h)
- Magnex Corp.**, 90-28 Van Wyck Expressway, Jamaica, N. Y. 1-2-3-4-5-6-7-8-9-11-14. (h)
- May Co., Donald M.**, 6055 Lankershim Blvd., North Hollywood, Calif. 1-5-7-8. (h)
- Meissner Mfg. Div., Maguire Industries, Inc.**, Mt. Carmel, Ill. 1-2-3-6-7-8-11-12. (h)
- Melpar, Inc.**, 452 Swann Ave., Alexandria, Va. 5. (h)
- Merit Coil & Transformer Corp.**, 4427 N. Clark St., Chicago 40, Ill. 1-2-6-7-8-10-11. (h)
- Mid-West Coil & Transformer Co.**, 1642 N. Halstead St., Chicago 14, Ill. 1-2-3-4-5-6-7-8-9-11-13. (h)
- Milwaukee Transformer Co.**, 5231 N. Hopkins St., Milwaukee 9, Wis. 1-2-3-4-5-6-7-8-9-10-11-13-14. (h)
- Moloney Electric Co.**, 5590 Bircher Blvd., St. Louis 20, Mo. 2-4-5-6-8. (h)
- Mt. Vernon Precision Transformer Co.**, 201 S. Third Ave., Mt. Vernon, N. Y. 1-3-4-5-6-7-8-9-10-11-12-14. (h)
- Muirhead & Co., Ltd.**, Beckenham, Kent, England. 1. (h)
- NEW YORK TRANSFORMER CO., INC.**, Third Ave., Alpha, N. J. 1-5-6-7-8-11. ADV. PG. 322. (h)
- North American Philips Co., Inc.**, 100 E 42nd St., New York 17, N. Y. 12-14. (h)
- Nothelfer Winding Labs.**, 9 Albemarle Ave., Trenton 3, N. J. 3-4-5-6-8-13. (h)
- Omega Mfg. Co.**, 40 Hudson St., New York, N. Y. 8-9-10-12. (h)
- ORTHO FILTER CORP.**, 198 Albion Ave., Paterson 2, N. J. 1-2-3-4-5-6-7-9-10. ADV. PG. 514. (h)
- OXFORD ELECTRIC CORP.**, 3911 S. Michigan Ave., Chicago 15, Ill. 1-4-5-7-8-9-10-11-12. ADV. PG. 602. (h)
- P C A ELECTRONICS, INC.**, 2180 Colorado Ave., Santa Monica, Calif. 5-7. ADV. PG. 580, 581. (h)
- Partridge Transformers, Ltd.**, Roebuck Rd., Tolworth, Surrey, England. 1-2-3-5-6-7-8-12-13-14. (h)
- Peerless Electrical Products Div., of Altec Lansing Corp.**, 9356 Santa Monica Blvd., Beverly Hills, Calif. 1-3-5-6-7-8-9. (h)
- PERMOFLUX CORP.**, 4900 W. Grand Ave., Chicago 39, Ill. 1-2-3-5-7-9. ADV. PG. 516. (h)
- Picker X-Ray Corp.**, 25 S. Broadway, White Plains, N. Y. 14. (h)
- Power Conversions**, 2635 W. Grand Ave., Chicago 12, Ill. 1-2-3-9-11-14. (h)
- Power Transformer Co., Inc.**, 532 Mulberry St., Newark 5, N. J. 4-5-6-7-8-9-12-13-14. (h)
- Presto Electric Co., Inc.**, 600 Fulton St., Elizabeth, N. J. 4-12. (h)
- Radio Apparatus Corp.**, 55 N. New Jersey St., Indianapolis 3, Ind. 12. (h)
- RADIO CORP. OF AMERICA**, Tube Dept., Harrison, N. J. 1-2-7-8. ADV. PG. 295, Inside Back & Back Covers. (h)
- Radio Music Corp.**, 84 S. Water St., Portchester, N. Y. 1-3-5-7. (h)
- Radionic Transformer Co.**, 411 S. Sangamon St., Chicago 7, Ill. 4. (h)
- Randall, Inc.**, Douglas, 102 High St., Westerly, R. I. 1-2-3-5-6-7-8-13. (h)
- RAYTHEON MFG. CO.**, Equipment Sales Div., Waltham 54, Mass. 4-5-6-7-8-9-12-13. ADV. PG. 420. (h)
- Rola Co., Inc.**, 2530 Superior Ave., Cleveland 14, Ohio. 1. (h)
- Rollan Electric Co.**, 8020 S. Park Ave., Chicago 19, Ill. 1. (h)
- Ross Mfg. Co.**, 2405 Armitage Ave., Chicago 47, Ill. 1-2-3. (h)
- S N C Mfg. Co., Inc.**, Box 277, Oshkosh, Wis. 1-2-6-7-8-11. (h)
- Sciaky Bros., Inc.**, 4915 W. 67th St., Chicago 38, Ill. 3-6-7-8-9-13. (h)
- SOLA ELECTRIC CO.**, 4633 W. 16th St., Chicago 50, Ill. 12. ADV. PG. 536. (h)
- Sorgel Electric Co.**, 838 W. National Ave., Milwaukee 4, Wis. 4-6-8-9-13. (h)
- Southwestern Industrial Electronics Co.**, 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. 1-2-3-6-7-9. (h)
- Specialties, Inc.**, Skunks Misery Rd., Syosset, N. Y. 1-2-3-5-6-7-8-9-11-12. (h)
- Square Root Mfg. Corp.**, 391 Saw Mill River Rd., Yonkers, N. Y. 1-5-6-7. (h)
- Standard Electronics Corp.**, 289 Emmet St., Newark 5, N. J. 1-2-4-6-7-8-9-10-12. (h)
- Standard Transformer Corp.**, 3571 Elston Ave., Chicago 18, Ill. 1-2-3-4-6-7-8-10-11-12. (h)
- Stanwyck Winding Co.**, 137 Walsh Ave., Newburgh, N. Y. 1. (h)
- STERLING TRANSFORMER CORP.**, 297 N. Seventh St., Brooklyn 11, N. Y. 1-2-5-6-7-9. ADV. PG. 432. (h)
- Super Electric Products Corp.**, 46 Oliver St., Newark 1, N. J. 1-2-3-4-5-6-7-8-9-10-11-12-13-14. (h)
- SUPERIOR ELECTRIC CO., THE**, 4000 Mae Ave., Bristol, Conn. 10. ADV. PAGE 192, 193. (h)
- SYLVANIA ELECTRIC PRODUCTS, INC.**, 1740 Broadway, New York 19, N. Y. 6-10. ADV. PG. 654-660. (h)
- T V Products Corp.**, 907 E. 23rd St., Paterson, N. J. 1-6-7. (h)
- Tartak Electronics, Inc.**, 2979 N. Ontario St., Burbank, Calif. 1-5-6-7-11. (h)
- Telectro Industries Corp.**, 35-18 37th St., Long Island City 1, N. Y. 1-7. (h)
- Television Laboratories, Inc.**, 5045 W. Lake St., Chicago 44, Ill. 1-7. (h)
- Thermador Electric Mfg. Co.**, 5119 District Blvd., Los Angeles 22, Calif. 1-2-3-5-6-7-8-10-11-14. (h)
- Thor Transformer & Electronics Co.**, 750 San Antonio Rd., Palo Alto, Calif. 5-6-9-10-12-13-14. (h)
- Thordarson-Meissner Mfg. Div.**, 500 W. Huron St., Chicago 10, Ill. 1-2-4-6-7-8-9-10-11-12-13-14. (h)
- Todd-Tran Corp.**, 156 Gramatan Ave., Mt. Vernon, N. Y. 1-2-3-4-5-6-7-8-9-11-12-13-14. (h)
- TORWICO ELECTRONICS, INC.**, 965 Frelinghuysen Ave., Newark 5, N. J. 1. ADV. PG. 583. (h)
- Transformer Engineers**, 161 E. California St., Pasadena 1, Calif. 1-2-6-7-11. (h)
- TRANSFORMER SPECIALTY CO., INC.**, Bala Cynwyd, Pa. 4-5-6-7-8-9-10-11. ADV. PG. 546. (h)
- TRANSFORMERS, INC.**, 532 North St., Endicott, N. Y. 1. ADV. PG. 412, 413. (h)
- Transvision, Inc.**, 460 North Ave., New Rochelle, N. Y. 1-3-6-7-8. (h)
- Trenton Transformer Corp.**, Trenton, N. J. 1-2-3-5-6-7-8-9-12-13. (h)
- TRESCO**, 3824 Terrace St., Philadelphia 28, Pa. 1-2-3-4-5-6-7-8-10-11. ADV. PG. 520. (h)
- TRIAD TRANSFORMER MFG. CO.**, 4055 Redwood Ave., Los Angeles, Calif. 1-2-3-5-6-7-8-11. ADV. PG. 394. (h)
- UNION ELECTRIC PRODUCTS CO.**, 24 Edison Pl., Newark 2, N. J. 1-4-6-7-12. ADV. PG. 414. (h)
- UNITED TRANSFORMER CO.**, 150 Varick St., New York 13, N. Y. 1-2-3-4-5-6-7-8-9-10-11-12. ADV. PG. Inside Front Cover. (h)
- Varo Mfg. Co., Inc.**, 1801 Walnut St., Garland, Texas. 5. (h)
- WESTINGHOUSE ELECTRIC CORP.**, P. O. Box 868, Pittsburgh 30, Pa. 5-6-7-8-9-13. ADV. PG. 45-55, 60. (h)
- WHEELER INSULATED WIRE CO., INC.**, 150 E. Aurora St., Waterbury 91, Conn. 1-2-5-6-7-11. ADV. PG. 346. (h)

TRANSFORMERS—Instrument

- A J F INDUSTRIES, INC.**, 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536. (h)
- ACME ELECTRIC CORP.**, 31 Water St., Cuba, N. Y. ADV. PG. 453. (h)
- AIRDESIGN, INC.**, 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 584. (h)
- AIRPAX PRODUCTS CO.**, Middle River, Baltimore 20, Md. ADV. PG. 119. (h)
- Allis-Chalmers Mfg. Co.**, 935 S. 70th St., Milwaukee 1, Wis. (h)
- Annis Co., R. B.**, 1101 North Delaware St., Indianapolis, Ind. (h)
- Arco Transformer & Electric Co.**, 1602 South Hanna St., Fort Wayne, Ind. (h)
- Associated Research, Inc.**, 3788 W. Belmont Ave., Chicago 18, Ill. (h)
- ATLAS ENGINEERING CO.**, 3 Edgewood St., Roxbury, Mass. ADV. PG. 558. (h)
- Automatic Temperature Control Co., Inc.**, 5212 Pulaski Ave., Philadelphia 44, Pa. (h)
- Birdsell Mfg. Co., Inc.**, 750 San Antonio Rd., Palo Alto, Calif. (h)
- Burlington Instrument Co.**, Burlington, Iowa. (h)
- CENTRAL TRANSFORMER CO.**, 910 W. Jackson Blvd., Chicago, Ill. ADV. PG. 577. (h)
- Chicago Electronic Engineering Co.**, 3223 W. Armitage Ave., Chicago 47, Ill. (h)
- CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP.**, 3501 W. Addison St., Chicago 18, Ill. ADV. PG. 468. (h)
- Cole Instrument Co.**, 1320 S. Grand Ave., Dept. A., Los Angeles 15, Calif. (h)
- Crest Laboratories, Inc.**, 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
- Dormeyer Industries**, 3418 N. Milwaukee Ave., Chicago 41, Ill. (h)
- ELECTRO-TECH EQUIPMENT CO.**, 55 Lispenard St., New York 13, N. Y. ADV. PG. 522. (h)
- ELECTRONIC TRANSFORMER CO., INC.**, 207 W. 25th St., New York, N. Y. ADV. PG. 428. (h)
- Espey Mfg. Co., Inc.**, 528 E. 72nd St., New York 21, N. Y. (h)
- Esterline-Angus Co., Inc.**, P. O. Box 596, Indianapolis, Ind. (h)
- FREED TRANSFORMER CO., INC.**, 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219. (h)
- GENERAL ELECTRIC CO.**, Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18. (h)
- Geotronic Labs, Inc.**, Dallas 11, Texas. (h)

GOSLIN ELECTRIC & MFG CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 618.
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
 Halldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill. (h)
 Hindle Transformer Co., Inc., Flemington, N. J. (h)
 Industrial Transformer Co., Gouldsboro, Pa. (h)
 Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill. (h)
 K-V Transformer Corp., 4414 Park Ave., Danbury, Conn. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272. (h)
KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 493. (h)
MAGNATRAN, INC., 248 Schuyler Ave., Kearny, N. J. ADV. PG. 501. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave., at Hobson Blvd., Easton, Pa. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wis. (h)
 Nothelfer Winding Labs., 9 Albermarle Ave., Trenton 3, N. J. (h)
 Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516. (h)
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
 Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J. (h)
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill. (h)
 Sierra Electronic Corp., San Carlos, Calif. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Transformer Corp., 3571 Elston Ave., Chicago 18, Ill. (h)
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. (h)
 Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. (h)
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif. (h)
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. (h)
TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 546. (h)
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 412, 413. (h)
 Transvison, Inc., 460 North Ave., New Rochelle, N. Y. (h)
 Trenton Transformer Corp., Trenton, N. J. (h)
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 520. (h)
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60. (h)
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346. (h)

TRANSFORMERS—Microwave
 See Microwave Accessories

TRANSFORMERS—Miniature

Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Peerless Electrical Products, Div. of Altac Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516. (h)
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 412, 413. (h)
 Telex, Inc., Telex Park, St. Paul 1, Minn. (h)

TRANSFORMERS—Precision Matched

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536. (h)
ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. ADV. PG. 453. (h)
AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. ADV. PG. 238. (h)
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 584. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 119. (h)
 Allied Mfg. Corp., 605-07 61st St., West New York, N. J. (h)
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 558. (h)
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 414. (h)
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. (h)
 Birdsall Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif. (h)

Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. (h)
CENTRAL TRANSFORMER CO., 910 W. Jackson Ave., Chicago, Ill. ADV. PG. 577. (h)
 Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill. (h)
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill. (h)
DIETZ DESIGN & MFG CO., Grandview 6, Mo. ADV. PG. 498. (h)
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 14, Ill. (h)
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 428. (h)
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18. (h)
 Geotronic Labs., Inc., Dallas 11, Texas. (h)
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
 Hindle Transformer Co., Inc., Flemington, N. J. (h)
 Industrial Transformer Co., Gouldsboro, Pa. (h)
 K-V Transformer Corp., Danbury, Conn. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272. (h)
KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 493. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wis. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 Peerless Electrical Products Div. of Altac Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516. (h)
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
 Randall, Inc., Douglas, 102 High St., Westerly, R. I. (h)
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420. (h)
 Sierra Electronic Corp., San Carlos, Calif. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Tex. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J. (h)
STERLING TRANSFORMER CORP., 297 N. Seventh St., Brooklyn 11, N. Y. ADV. PG. 432. (h)
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. (h)
 Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif. (h)
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif. (h)
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. (h)
TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 546. (h)
 Transvison, Inc., 460 North Ave., New Rochelle, N. Y. (h)
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346. (h)

TRANSFORMERS—Pulse

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536. (h)
ACME ELECTRIC CORP., 31 Water St., Cuba, N. Y. ADV. PG. 453. (h)
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. (h)
AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. ADV. PG. 238. (h)
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 584. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 119. (h)
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 558. (h)
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 562. (h)
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. (h)
 Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill. (h)
CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 W. Addison St., Chicago 18, Ill. ADV. PG. 468. (h)
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455. (h)

Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 14, Ill. (h)
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. (h)
 Electrocoil Transformer Co., Westerly Rd., Ossining, Ill. (h)
 Electronic Computer Div., Underwood Corp., 160 Avenue of the Americas, New York 13, N. Y. (h)
 Electronic Systems Co., 578 E. 161st St., New York 56, N. Y. (h)
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 428. (h)
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill. (h)
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480. (h)
 Engineering Research Associates, Div. of Remington Rand, Inc., 1902 W. Minnehaha Av., St. Paul, Minn. (h)
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486. (h)
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153. (h)
 Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 618. (h)
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
 Industrial Transformer Co., Gouldsboro, Pa. (h)
 Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md. (h)
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill. (h)
 K-V Transformer Corp., Danbury, Conn. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272. (h)
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39. (h)
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 360. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirtieth St., Brooklyn 32, N. Y. ADV. PG. 575. (h)
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wis. (h)
P C A ELECTRONICS, INC., 2180 Colorado Ave., Santa Monica, Calif. ADV. PG. 580, 581. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 Peerless Electrical Products Div. of Altac Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516. (h)
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa. (h)
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y. (h)
 Ram Electronics, Inc., S. Buckout St., Irvington, N. Y. (h)
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420. (h)
 Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Pa. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
STERLING TRANSFORMER CORP., 297 N. Seventh St., Brooklyn 11, N. Y. ADV. PG. 432. (h)
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. (h)
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y. (h)
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 514. (h)
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562. (h)
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif. (h)
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif. (h)
TRANSFORMER SPECIALTY CO., Bala Cynwyd, Pa. ADV. PG. 546. (h)
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 412, 413. (h)
 Transvison, Inc., 460 North Ave., New Rochelle, N. Y. (h)
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 520. (h)
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
UTAH RADIO PRODUCTS, INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 490. (h)
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 45-55, 60. (h)
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346. (h)

TRANSFORMERS—r-f and i-f

ACE COIL & ELECTRONICS CO., 914 Middlesex Ave., Metuchen, N. J. ADV. PG. 402.
 AEROCOIL INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 587.
 Automatic Mfg. Corp., 65 Gouverneur St., Newark 4, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
B.G.S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
 Carad Corp., 93 Leland Ave., San Francisco 28, Calif.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, Ill. ADV. PG. 601.
 Custom Electronics Corp., Morris Plains, N. J.
 DeWitt Development Co., 12545 S. 69th Ave., Palos Heights, Ill.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
 Electronic Transformer Co., Westerly Rd., Ossining, N. Y.
 Embassy Engineering Corp., 224 E. 204th St., New York 58, N. Y.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Essex Electronics, Berkeley Heights, N. J.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 554.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18. (h)
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 596.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wis. (h)
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 232, 233.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420. (h)
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 615.
 Rollan Electric Co., 8020 S. South Park, Chicago 19, Ill.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
 Sierra Electronic Corp., San Carlos, Calif.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Stanwyck Winding Company, 137 Walsh Ave., Newburgh, N. Y.
 Summit Coil Co., 67 Union Place, Summit, N. J.
 Super Electric Products Corp., 46 Oliver St., Newark, N. J. (h)
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 520. (h)
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

TRANSFORMERS—Subsonic

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536. (h)

AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. ADV. PG. 238.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 558. (h)
CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd., Chicago, Ill. ADV. PG. 577.
CHICAGO TRANSFORMER DIV., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill. ADV. PG. 468. (h)
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 428. (h)
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 486. (h)
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219. (h)
 Geotronic Labs., Inc., Dallas 11, Texas. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272. (h)
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
PERMOFLUX CORP., 4900 W. Grand Ave., Chicago 39, Ill. ADV. PG. 516. (h)
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. (h)
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif. (h)
TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 546. (h)
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)

TRANSFORMERS—TV Deflection

Arco Transformer & Electric Co., 1602 South Hanna St., Fort Wayne, Ind. (h)
 Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.
CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
COILCRAFT, INC., 3716 N. Cicero Ave., Chicago 41, Ill. ADV. PG. 601.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Hallidson Co., The, 4500 Ravenswood Ave., Chicago 40, Ill.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wis. (h)
 Penn Tran Corp., Bellefonte, Pa.
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Mullard Overseas Ltd., Century House Shaftesbury Ave., London, W. C. 2, England.
 Ram Electronics, Inc., S. Buckout St., Irvington N. Y.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill. (h)
 S N C Mfg. Co., Inc., Box 277, Oshkosh, Wis. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. (h)

T V Products Corp., 907 E. 23rd St., Paterson, N. J.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. (h)
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.

TRANSFORMERS—TV Impedance Matching

Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind. (h)
 Argyle Electronics Co., 8 West 18th St., New York 11, N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Blonder-Tongue Labs., Inc., 526-536 North Ave., Westfield, N. J.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. (h)
CENTRAL TRANSFORMER CO., 910 W. Jackson Ave., Chicago, Ill. ADV. PG. 577.
 Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Dane Electronic Labs., Inc., 316 Stuart St., Boston, Mass.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. (h)
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219. (h)
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J. (h)
 Industrial Transformer Co., Gouldsboro, Pa. (h)
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
LINEAR EQUIPMENT LABS., Brightwater Place, Massapequa, N. Y. ADV. PG. 624.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wis. (h)
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
 S N C Mfg. Co., Inc., Box 277, Oshkosh, Wis. (h)
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 476.
 Square Root Mfg. Co., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 514.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 464.

TRANSFORMERS—Toroidal

ACME ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 202, 203. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore, Md. ADV. PG. 119. (h)
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass. (h)

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 215.
C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Carad Corp., 93 Leland Ave., San Francisco 28, Calif.
 Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill.
CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 W. Addison St., Chicago 18, Ill. ADV. PG. 468.
 Coast Coil Co., 5352 W. Washington Blvd., Los Angeles 16, Calif.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Cole Instrument Co., 1300 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
COMMUNICATION ACCESSORIES CO., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo. ADV. PG. 454, 455. (h)
CONNECTICUT TELEPHONE & ELECTRIC CORP., 70 Brittainia St., Meriden, Conn. ADV. PG. 590.
DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, Ill. ADV. PG. 509.
DIFTZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 498.
 Electricoil Transformer Co., Westerly Rd., Ossining, N. Y.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
FRED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 219. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18. (h)
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
 Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
 Harder Co., Donald C., 3338 India St., San Diego 1, Calif.
HYCOR CO., INC., 11423 Vanowen St., North Hollywood, Calif. ADV. PG. 525. (h)
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
 Industrial Transformer Co., Gouldsboro, Pa. (h)
 Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md.
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272. (h)
LABORATORY FOR ELECTRONICS, INC., 75 Pitts St., Boston 14, Mass. ADV. PG. 38, 39. (h)
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 437. (h)
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif. (h)
MAGNETICS, INC., Box 230-E, Butler, Pa. ADV. PG. 561.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 611.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J. (h)
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. (h)
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.
 Tibbetts Industries, Inc., Camden, Maine.
TOROCOIL CO., 1374 Mobile Court, St. Louis, Mo. ADV. PG. 476. (h)
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 583.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 412, 413. (h)
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.

TRANSFORMERS—Ultrasonic

A J F INDUSTRIES, INC., 852 Monroe St., Brooklyn 21, N. Y. ADV. PG. 536. (h)
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. (h)
AIRCRAFT TRANSFORMER CORP., West & Willow Aves., Long Branch, N. J. ADV. PG. 238.
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 119. (h)
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 558. (h)
AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. ADV. PG. 414.
CENTRAL TRANSFORMER CO., 910 W. Jackson Blvd., Chicago, Ill. ADV. PG. 577.
CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 428.
EMPIRE COIL CO., INC., Beechwood Ave. & Second St., New Rochelle, N. Y. ADV. PG. 480.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 272. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Partridge Transformers, Ltd., Reebuck Rd., Tolworth, Surrey, England. (h)
 Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill. (h)
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J. (h)
TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 546.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394. (h)
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 488.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)

TRANSISTORS

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-18.
 Germanium Products Corp., 26 Cornelison Ave., Jersey City, N. J.
 Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.
 Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 434, 435.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Texas Instruments Incorporated, 6000 Lemmon Ave., Dallas, Texas.
 Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass.
 Transistron Electronic Corp., 403-407 Main St., Melrose 76, Mass.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

TRANSMISSION LINES

See Cable, Coaxial or Waveguides

TRANSMITTERS—Aircraft

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
AIR ASSOCIATES INC., Teterboro, N. J. ADV. PG. 329.
AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 168.
 Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
DOLLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 591.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 Northeastern Engineering Inc., Manchester, N. H.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Sorensen Industrial Electronic Co., 87 N. Day St., Orange, N. J.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

TRANSMITTERS—Amateur

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 404-407.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
 Lysox Mfg. Co., 82 Herman St., East Rutherford, N. J.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
 Northeastern Engineering Inc., Manchester, N. H.
 Philmore Mfg. Co., Inc., 113 University Pl., New York 3, N. Y.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 World Radio Laboratories, 740-44 W. Broadway, Council Bluffs, Iowa.

TRANSMITTERS—Broadcast

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Gates Radio Co., Quincy, Ill.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
PARISIER & CO., MAURICE I., 1475 Broadway, New York 36, N. Y. ADV. PG. 423.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

TRANSMITTERS—Color Television

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.

RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
ELECTROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
EL-INSTRUMENT CO., INC., 50 Patterson Ave., East Rutherford, N. J. ADV. PG. 623.

TRANSMITTERS—Direction Finding

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
Affet Radio & Television Co., 2530 Belmont Ave., New York 1, N. Y.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

TRANSMITTERS—f-m

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Melpar, Inc., 452 Swann Ave., Alexandria, Va.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Radio Engineering Labs., Inc., 36-40 37th St., Long Island City, N. Y.
Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Telemetering Associates, P. O. Box 6, Silver Spring, Md.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

TRANSMITTERS—Facsimile

Acme Teletronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
Alden Systems, Inc., Alden Research Center, Westboro, Mass.
Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Muirhead & Co., Ltd., Beckenham, Kent, England.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. 384.

TRANSMITTERS—Fixed Frequency

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.

DOLLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 591.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
El-Tronics Inc., 2649 N. Howard St., Philadelphia 33, Pa.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
Gates Radio Co., Quincy, Ill.
Heintz & Kaufman Equipment, Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
Schuttig & Co., Inc., Ninth & Kearney Sts., N. E., Washington 17, D. C.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

TRANSMITTERS—Fixed Station Communication

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 82, 83.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
DOLLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 591.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
Farmers Engineering & Mfg. Co., Irwin, Pa.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.
Gates Radio Co., Quincy, Ill.
Heintz & Kaufman Equipment, Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
PARISIER & CO., MAURICE I., 1475 Broadway, New York 36, N. Y. ADV. PG. 423.
Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
Schuttig & Co., Inc., 9th & Kearney St., N. E., Washington 17, D. C.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Transitron, Inc., 154 Spring St., New York 12, N. Y.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

TRANSMITTERS—Loran

MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.

TRANSMITTERS—Marine

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Electro Craft Inc., 68 Jackson St., Stamford, Conn.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.
Gates Radio Co., Quincy, Ill.
Gray Radio Co., 501 Forest Hill Blvd., West Palm Beach, Fla.
Jefferson, Inc., Ray, 40 E. Merrick Road, Freeport, N. Y.
Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
Lysco Mfg. Co., 82 Herman St., East Rutherford, N. J.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 234.
Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

TRANSMITTERS—Microwave

See Microwave Accessories

TRANSMITTERS—Portable and Mobile Radio-telephone

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 168.
Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
DOLLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 591.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
Electrotech Corp., 15601 Arrow Hwy., Azusa, Calif.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.
Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
Lysco Mfg. Co., 82 Herman St., East Rutherford, N. J.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.
Measurement Engineering Ltd., Arnprior, Ontario, Canada.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 National Electronics Laboratories, Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Raytheon Mfg. Co., Special Products Div., 4132 W. Belmont Ave., Chicago 41, Ill.
 Schuttig & Co., Inc., 9th & Kearny Sts., N. E., Washington 17, D. C.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

TRANSMITTERS—Pulse Time Modulation

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.

TRANSMITTERS—Radar

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 Video Corp. of America, 229 W. 28th St., New York 1, N. Y.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.

TRANSMITTERS—Radio Range

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
COLLINS RADIO CO., Cedar Rapids, Iowa ADV. PG. 82, 83.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Gates Radio Co., Quincy, Ill.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Northeastern Engineering Inc., Manchester, N. H.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

TRANSMITTERS—Railroad

American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
DETECTOLAB, INC., 6544 N. Sheridan Rd., Chicago 26, Ill. ADV. PG. 609.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

TRANSMITTERS—Television

DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
 Gates Radio Co., Quincy, Ill.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.

TRANSMITTERS—uhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
 Gates Radio Co., Quincy, Ill.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stockman Electronics Research Co., 543 Lexington St., Waltham 54, Mass.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

TRANSMITTERS—vhf

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 168.
 American Electroneering Corp., 2040 Colorado Ave., Santa Monica, Calif.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 616.
 Communications Co., 300 Greco Ave., Coral Gables 34, Fla.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Craft Inc., 68 Jackson St., Stamford, Conn.
 Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Gates Radio Co., Quincy, Ill.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 144.

Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 National Electronics Laboratories, Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Schuttig & Co., Inc., Ninth & Kearney Sts., N. E., Washington 17, D. C.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 562.
 Telemetering Associates, P. O. Box 6, Silver Spring, Md.
TEL-INSTRUMENT CO., INC., 50 Paterson Ave., East Rutherford, N. J. ADV. PG. 623.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 West Coast Electronics Co., 587 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Missouri.

TRAPS—Wave

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 239.
 Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
 Epco Electronics, 140 Liberty St., New York, N. Y.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
KALBFELL LABS., INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 365.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

TRIMMERS—Capacitors

See Capacitors

TREATING—Fungus & Moisture Proof

Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 76.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Princeton St., New York, N. Y. ADV. PG. 532.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Production Engineering Co., 173 Sargeant Ave., Clifton, N. J.
SEALTRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
 Stevenson Bro. & Co., 110 Race St., Philadelphia 6, Pa.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 606.

TUBE PARTS

Anodes, Carbon

NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 331.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.
SYLVANIA ELECTRIC PRODUCTS INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Anodes, Gold

Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.

Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Wildberg Bros., Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

Anodes, Graphite

NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 331.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.

Anodes, Metal

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 528.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Haydu Brothers, Plainfield, N. J.
JOHNSON & HOFFMAN MFG. CO., 31 E. Second St., Mineola, N. Y. ADV. PG. 358, 359.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
STAYER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 353.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 162, 163.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

Anodes, Metallized Graphite

STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 388, 389.

Anodes, Silver

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 108-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

Base Pins

ALLOY METAL WIRE CO., 13th & Penna Ave., Prospect Park, Pa. ADV. PG. 526.
AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 521.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
PIX MFG CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Screw Corp. of America, 103 Park Ave., New York 17, N. Y.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Bases

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Electronic Mfg. Co., 20 Orange St., Newark, N. J.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
 Isolantite Mfg. Corp., Stirling, N. J.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Owens Illinois Glass Co., Closure & Plastic Div., 405 Lexington Ave., New York 17, N. Y.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

Bulbs & Envelopes

Corning Glass Works, Corning, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.

Button Stems

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SCIENTIFIC ELECTRONIC LABS, INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 545
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Thomas Electronics, Inc., 118 Ninth St., Passaic, N. J.

Caps

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Electronic Mfg. Co., 20 Orange St., Newark, N. J.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565
KIRCHBERGER & Co., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Cathode Ray Tube Powders

Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 381.

Cathode Ray Tube Side Contacts

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Cathodes, Sleeves, Discs and Tubes

Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
 Haydu Brothers, Plainfield, N. J.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 162, 163.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Conductive Paints

See Paints, Conductive

Filament Wire

ALLOY METAL WIRE CO., 13th & Penna Ave., Prospect Park, Pa. ADV. PG. 526.
 Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
 Haydu Brothers, Plainfield, N. J.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Getters

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Kemet Co., a Division of Union Carbide & Carbon Corp., Madison Ave. & 117th St., Cleveland 1, Ohio.
 King Laboratories Inc., 127 Solar St., Syracuse 4, N. Y.

Metal Hydrides, Inc., Beverly, Mass.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Grids and Supports

ALLOY METAL WIRE CO., 13th & Penna Ave., Prospect Park, Pa. ADV. PG. 526.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
JOHNSON & HOFFMAN MFG. CO., 31 E. Second St., Mineola, N. Y. ADV. PG. 358, 359.
KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 464.
NATIONAL CARBON CO., Division of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 331.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
STAYER CO., INC., THE, Box 431, Bay Shore, N. Y. ADV. PG. 353.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 392, 393.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

Grid Wire

Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 154.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 528.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Heat Radiators

EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 528.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Haydu Brothers, Plainfield, N. J.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
STAYER CO., INC., THE, Box 431, Bay Shore, N. Y. ADV. PG. 353.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Metal Supports

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Electronic Mfg. Co., 20 Orange St., Newark, N. J.
ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 528.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
 Haydu Brothers, Plainfield, N. J.
JOHNSON & HOFFMAN MFG. CO., 31 E. Second St., Mineola, N. Y. ADV. PG. 358, 359.
 King Laboratories, Inc., 127 Solar St., Syracuse 4, N. Y.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
STAYER CO., INC., THE, Box 431, Bay Shore, N. Y. ADV. PG. 353.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 595.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

Mica Supports

Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 Haydu Brothers, Plainfield, N. J.
JOHNSON & HOFFMAN MFG. CO., 31 E. Second St., Mineola, N. Y. ADV. PG. 358, 359.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micacraft Products Inc., 703 McCarter Highway, Newark 5, N. J.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Tube Seal Leads

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Bigelow Mfg. Corp., 225 W. Bigelow St., Newark 8, N. J.
ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. Y. ADV. PG. 528.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 235.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 460.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

Water Jackets

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 460.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.

Wire Parts

ALLOY METAL WIRE CO., 13th & Penna Ave., Prospect Park, Pa. ADV. PG. 526.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Electronic Mfg. Co., 20 Orange St., Newark, N. J.
ELECTRONIC PARTS MFG. CO., 508 25th St., Union City, N. J. ADV. PG. 528.
 King Laboratories, Inc., 127 Solar St., Syracuse 4, N. Y.
METAL TEXTILE CORP., 547 E. First Ave., Roselle, N. J. ADV. PG. 464.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 595.

TUBE RECTIFIERS**See Rectifiers****TUBES—Ballast**

AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 258.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 236, 237.
 Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 128.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.

TUBES—Battery Charger

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.

Continental Electric Co., Geneva, Ill.
ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. ADV. PG. 394.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.

TUBES—Bolometer

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.

TUBES—Cathode Ray, Instrument Use

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
 Fidelity Tube Corp., 900 Passaic Ave., East Newark, N. J.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Electronics Div., Arturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 Haydu Brothers, Plainfield, N. J.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
 Philco Corp., Accessory Div. A & Allegheny Ave., Philadelphia 34, Pa.
 Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 Twentieth Century Electronics, Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

TUBES—Cathode Ray, Multiple Gun

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 336.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
 Twentieth Century Electronics, Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

TUBES—Cathode Ray, Studio or Theatre

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Rauland Corp., The, 4245 N. Knox Ave., Chicago 41, Ill.
 Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

TUBES—Cathode Ray, Television Picture

Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 Calvideo Tube Corp., 5232 W. 104th St., Los Angeles 45, Calif.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Claremont Laboratories, Inc., New Cassel, N. Y.
 DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.
EITEL-MCCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
EUREKA TELEVISION & TUBE CORP., 69 Fifth Ave., Hawthorne, N. J. ADV. PG. 543.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.

Fidelity Tube Corp., 900 Passaic Ave., East Newark, N. J.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Electronics, Div. Acturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 Glasscraft Co., 5210 E. Olympic Blvd., Los Angeles 22, Calif.

Haydu Brothers, Plainfield, N. J.
 Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
 National Video Corp., 3019 W. 47th St., Chicago, Ill.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Rauland Corp., The, 4245 N. Knox Ave., Chicago 41, Ill.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
SARKS TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 276.
 Sheldon Electric Co. Div., Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
TEL-O-TUBE CORP. OF AMERICA, 180 Van Riper Ave., East Paterson, N. J. ADV. PG. 462.
 Thomas Electronics, Inc., 118 Ninth St., Passaic, N. J.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 128.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500 Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Electrometer

GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.

TUBES—Geiger**See Tubes, Radiation Counter****TUBES—Glow or Discharge**

Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Consolidated Vacuum Corp., 735 Ridge Rd., W. Rochester 3, N. Y.
 Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Kemlite Labs., 1819 Grand Ave., Chicago 22, Ill.
 MacKay Laboratories, 1946 North Kedzie, Chicago, Ill.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
RED BANK DIV. BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.

TUBES—Hearing Aid

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
 Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 128.

TUBES—Ignitron

GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
NATIONAL ELECTRONICS, INC., Geneva, Ill. ADV. PG. 448.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Ionization

Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Kemlite Labs., 1819 Grand Ave., Chicago 22, Ill.
 Lewis & Kaufman, Ltd., P. O. Box 337, 90 El Rancho Ave., Los Gatos, Calif.
 Menlo Research Laboratory, Menlo Park, Calif.
 Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Twentieth Century Electronics, Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.
 Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Klystron

BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 230, 231.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
PAYTHEON MFG. CO., POWER TUBE DIV., Waltham 54, Mass. ADV. PG. 421.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 276.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
VARIAN ASSOCIATES, 990 Varian St., San Carlos, Calif. ADV. PG. 392, 393.

TUBES—Magnetron

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
BOMAC LABORATORIES INC., Salem Rd., Beverly, Mass. ADV. PG. 230, 231.
FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 MacKay Laboratories, 1946 North Kedzie, Chicago, Ill.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston, Mass. ADV. PG. 110.
RADIO CORP. OF AMERICA, Tube Dept. Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
RAYTHEON MFG. CO., POWER TUBE DIV., Waltham 54, Mass. ADV. PG. 421.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 276.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Microwave Receiving or Transmitting

See Microwave Accessories

TUBES—Miniature

ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 282.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
 Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 276.

Sheldon Electric Co., Div., Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J.
 Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 128.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Phototubes

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Continental Electric Co., Geneva, Ill.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Resistor Sales of Nevada, P. O. Box 2502, Reno, Nev.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Phototubes, Multiplier

ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 282.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 302.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 128.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Photovoltaic

See Cells, Photovoltaic

TUBES—Pirani

Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
 Continental Electric Co., Geneva, Ill.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Professional Electronics Co., 180 E. California St., Pasadena, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

TUBES—Power Amplifier

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
 Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Electronics Div. Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 Haydu Brothers, Plainfield, N. J.
 Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.
 Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.
 Lewis & Kaufman, Ltd., P. O. Box 337, 90 El Rancho Ave., Los Gatos, Calif.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 460.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.

Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
 Taylor Tubes, Inc., 2312 W. Wabansia Ave., Chicago 47, Ill.
UNITED ELECTRONICS CO., 42 Spring St., Newark 4, N. J. ADV. PG. 73-75.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Receiving

GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Haydu Brothers, Plainfield, N. J.
 Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 276.
 Sheldon Electric Co. Div., Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J.
 Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 128.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Rectifying, Gas Filled Type

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
 Baldor Electric Co., 4353 Duncan Ave., St. Louis, Mo.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.
 Continental Electric Co., Geneva, Ill.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. ADV. PG. 394.
 Federal Engineering Co., 37 Murray St., New York 7, N. Y.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Electronics Div. Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass.
 Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. J.
 Lewis & Kaufman, Ltd., P. O. Box 337, 90 El Rancho Ave., Los Gatos, Calif.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 460.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL ELECTRONICS, INC., Geneva, Ill. ADV. PG. 448.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
 Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Rauland Corp., The, 4245 N. Knox Ave., Chicago 41, Ill.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
 Sheldon Electric Co. Div., Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
UNITED ELECTRONICS CO., 42 Spring St., Newark 2, N. J. ADV. PG. 73-75.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Rectifying, Vacuum Type

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.

CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.
 Continental Electric Co., Geneva, Ill.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 378, 379.
 Federal Engineering Co., 37 Murray St., New York 7, N. Y.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Electronics Div. Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 Haydu Brothers, Plainfield, N. J.
 Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.
 Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass.
 Lewis & Kaufman, Ltd., P. O. Box 337, 90 El Rancho Ave., Los Gatos, Calif.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 460.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
 Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
RAYTHEON MFG. CO., Power Tube Div., Waltham 54, Mass. ADV. PG. 421.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
 Sheldon Electric Co. Div., Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Taylor Tubes, Inc., 2312 W. Wabansia Ave., Chicago 47, Ill.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 128.
UNITED ELECTRONICS CO., 42 Spring St., Newark 2, N. J. ADV. PG. 73-75.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Subminiature

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL UNION RADIO CORP., 237 Jacksonville Rd., Hatboro, Pa. ADV. PG. 117.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
 Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 128.
VICTOREEN INSTRUMENT CO., 5806 Hough St., Cleveland 3, Ohio. ADV. PG. 206, 207.

TUBES—Television

See Tubes, Cathode Ray, Television Picture

TUBES—Television Camera Pickup

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.

TUBES—Television Projection (for Home Entertainment)

American Television, Inc., 523 S. Plymouth St., Chicago 5, Ill.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Tele-Ray Tube Co., Inc., 984 Saw Mill River Rd., Yonkers, N. Y.

TUBES—Thyratron

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 230, 231.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.
 Continental Electric Co., Geneva, Ill.
 DuMont Laboratories, Inc., Alien B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Electronic Enterprises Inc., 65 7th Ave., Newark 4, N. J.
ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. ADV. PG. 394.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 General Electronics Div. Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. J.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 460.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL ELECTRONICS, INC., Geneva, Ill. ADV. PG. 448.
 Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
 Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
 Sheldon Electric Co. Div., Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
UNITED ELECTRONICS CO., 42 Spring St., Newark 2, N. J. ADV. PG. 73-75.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—TR, Pre TR & Anti TR

BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 230, 231.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston, Mass. ADV. PG. 110.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—Traveling Wave (Amplifying Type)

BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 230, 231.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley, N. J.
 Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.
 Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
 Pioneer Electronics Corp., Santa Monica, Calif.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stewart-Speller Associates, Soquel, Calif.

TUBES—Voltage Reference or Regulating

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
ANTON ELECTRONIC LABORATORIES, INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 262.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 112, 113.
 Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J.
 Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
 Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. J.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Nuclear Development Lab., Box 7034, Kansas City, Mo.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 134.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.
WESTINGHOUSE ELECTRIC CORP., Electronic Tube Div., Dept. A-500 Box 284, Elmira, N. Y. ADV. PG. 56-59.

TUBES—X-Ray

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 429.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 565.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 460.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

TUBING—Aluminum

Kaiser Aluminum & Chemical Sales Inc., 1924 Broadway, Oakland 12, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
 Reverse Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.

TUBING—Brass or Copper

AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
 Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 Precision Tube Co., Inc., North Wales, Pa.
 Reverse Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
 Schuster Co., Carl W., 80 E. Montauk Pkwy., Lincolnton, N. Y.
 Uniform Tubes, Level Rd., Colledgeville 2, Pa.
 Wells & Co., Inc., A. H., 181 E. Aurora St., Waterbury, Conn.

TUBING—Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
CENTRALAB DIV. GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
 Colonial Insulator Co., 907 Grant St., Akron 11, Ohio.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
 Frenchtown Porcelain Co., Trenton 9, N. J.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Illinois Electric Porcelain Co., Macomb, Ill.

Insulantite Mfg. Corp., Stirling, N. J.
 KIRCHBERGER & CO., INC., M., 1425 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 LAPP INSULATOR CO., INC., Radio Specialties Div., 32 Gilbert St., Le Roy, N. Y. ADV. PG. 382, 383.
 Louthan Mfg. Co., East Liverpool, Ohio.
 Porcelain Products, Inc., Findlay, Ohio.
 Saxonburg Ceramics, Saxonburg, Pa.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
 THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 453.
 U. S. Stoneware Co., Akron 9, Ohio.
 Wisconsin Porcelain Co., Sun Prairie, Wis.

TUBING—Fabric

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Insulating-Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Moore Co., Howard J., 266 Williams St., New York 38, N. Y.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.
 Taylor Fibre Co., Norristown, Pa.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.

TUBING—Fibre

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

TUBING—Fused Quartz

Amersil Co., Inc., Hillside, N. J.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 Hanovia Chemical & Mfg. Co., 233 N.J.R.R. Ave., Newark, N. J.
 Sincor Products Co., Malden, Mass.
 Thermal Syndicate, Ltd., The, 14 Bixley Heath, Lynbrook, N. Y.

TUBING—Glass

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
 Corning Glass Works, Corning, N. Y.
 Fischer & Porter Co., 476 Warminster Rd., Hatboro, Pa.
 PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.

TUBING—Glass Fibre Insulation

BENTLEY-HARRIS MFG. CO., Conshohocken, Pa. ADV. PG. 380.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 National Electric Coil Co., Columbus 16, Ohio.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.
 Taylor Fibre Co., Norristown, Pa.
 Thompson Co., 1733 Cordova St., Los Angeles 7, Calif.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.

TUBING—Knitted Wire

METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 464.

TUBING—Metal and Alloy

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 100.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Bridgeport Brass Co., 30 Grant St., Bridgeport, Conn.
 Carpenter Steel Co., Alloy Tube Div., Union, N. J.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
 Haynes Stellite Co., Division of Union Carbide & Carbon Corp., Kokomo, Indiana.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
 International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
 MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
 Precision Tube Co., Inc., North Wales, Pa.
 Production Engineering Co., 173 Sargeant Ave., Clifton, N. J.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
 Reynolds Metals Co., 2000 S. 9th St., Louisville, Ky.
 Revere Copper & Brass, Inc., 230 Park Avenue, New York 17, N. Y.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 162, 163.
 Uniform Tubes, Level Rd., Collegeville 2, Pa.
 Wells & Co., Inc., A. H., 181 E. Aurora St., Waterbury, Conn.

TUBING—Mica

Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Huse Liberty Mica Co., 171 Camden St., Boston, Mass.
 Mica Insulator Co., Schenectady 1, N. Y.

TUBING—Nickel

Bishop & Co., Platinum Works, Malvern, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
 Precision Tube Co., Inc., North Wales, Pa.
 SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 162, 163.
 Uniform Tubes, Level Rd., Collegeville 2, Pa.

TUBING—Paper

ACCURATE PAPER TUBE CO., 801 N. Peoria St., Chicago 22, Ill. ADV. PG. 338.
 CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 345.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 PARAMOUNT PAPER TUBE CORP., 614 Lafayette St., Fort Wayne, Ind. ADV. PG. 452.
 PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
 STONE PAPER TUBE CO., INC., 900 Franklin St., N.E., Washington 17, D. C. ADV. PG. 171.

TUBING—Plastic

Anchor Industrial Co., 36-36 36th St., Long Island City 6, N. Y.
 Anchor Plastics Co., Inc., 36-36 36th St., Long Island City, 6, N. Y.
 B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.
 CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 345.

COMMERCIAL PLASTICS CO., 2822 W. North Ave., Chicago 47, Ill. ADV. PG. 572.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
 Extruders, Inc., 3232 W. El Segundo Blvd., Hawthorne, Calif.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 General Tire & Rubber Co., The, Akron, Ohio.
 Gering Products, Inc., N. 7th St. at Monroe Ave., Kenilworth, N. J.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. Y. ADV. PG. 64, 65.
 Javex, P. O. Box 646, Redlands, Calif.
 Keller Products Co., 41 Union St., Manchester, N. H.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Mica Insulator Co., Schenectady 1, N. Y.
 MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.
 PANELYTE DIV., ST. REGIS PAPER CO., 230 Park Ave., New York, N. Y. ADV. PG. 339.
 PARAMOUNT PAPER TUBE CORP., 614 Lafayette St., Fort Wayne, Ind. ADV. PG. 452.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
 Plax Corp., P. O. Box 1019, Hartford, Conn.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 532.
 PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Resin Industries, Santa Barbara, Calif.
 RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 583.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Shoe Form Co., Inc., Auburn, N. Y.
 Southern Industries of Maryland, Inc., 1401 Reistertown Rd., Pikesville 8, Md.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 Synthane Corp., Oaks, Pa.
 Taylor Fibre Co., Norristown, Pa.
 U. S. GASKET CO., Box 93, Camden, N. J. ADV. PG. 530, 531.
 U. S. Plywood Corp., Electrical Structures Dept., 55 W. 44th St., New York 17, N. Y.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

TUBING—Precious Metal

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

TUBING—Steel

Armcro Steel Corp., 703 Curtis St., Middletown, Ohio.
 Avon Tube Div., Higbie Mfg. Co., Rochester, Mich.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Carpenter Steel Co., Alloy Tube Div., Union, N. J.

CRUCIBLE STEEL CO. OF AMERICA, 405 Lexington Ave., New York 17, N. Y. ADV. PG. 337.
 Production Engineering Co., 173 Sargeant Ave., Clifton, N. J.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
 Revere Copper & Brass Inc., 230 Park Avenue, New York 17, N. Y.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 162, 163.
 Tempo T-V Products Co., 2450 Ramona Blvd., Los Angeles 33, Calif.
 Uniform Tubes, Level Rd., Collegeville 2, Pa.

TUBING—Synthetic Resin

BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. ADV. PG. 600.
 Houghton Laboratories Inc., 322 Bush St., Olean, N. Y.
 Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 Markel & Sons, L. Frank, School House Lane, Norristown, Pa.
 MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 Resin Industries, Santa Barbara, Calif.
 RESISTOFLEX CORP., 39 Planson St., Belleville 9, N. J. ADV. PG. 583.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Southern Industries of Maryland, Inc., 1821 Reisterstown Rd., Pikesville 8, Md.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.

TUBING—Varnished or Lacquered

B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.
 BENTLEY-HARRIS MFG. CO., Conshohocken, Pa. ADV. PG. 380.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 345.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Markel & Sons, L. Frank, School House Lane, Norristown, Pa.
 MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 National Electric Coil Co., Columbus 16, Ohio.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.
 PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 545.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Taylor Fibre Co., Norristown, Pa.
 Tempo T-V Products Co., 2450 Ramona Blvd., Los Angeles 33, Calif.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.

TUBING—Varnished Cambric Insulation

BENTLEY-HARRIS MFG. CO., Conshohocken, Pa. ADV. PG. 380.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
 JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Markel & Sons, L. Frank, School House Lane, Norristown, Pa.

MITCHELL-RAND INSULATION CO., INC., 51 Murray St., New York 7, N. Y. ADV. PG. 222.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.

TUBING—Waveguide

Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
 AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
 BART LABORATORIES, CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 593.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.

TUNERS—a-m

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 Sargent-Rayment Co., The, 1401 Middle Harbor Rd., Oakland 20, Calif.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 VARI-L CO., INC., P. O. Box 1433, Stamford, Conn. ADV. PG. 523.

TUNERS—f-m

Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 444.
 Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 486.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.

TUNERS—f-m/a-m

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 BROWNING LABORATORIES, INC., 750 Main St., Winchester, Mass. ADV. PG. 444.
 Collins Audio Products Co., P. O. Box 368 Westfield, N. J.
 Fisher Radio Corp., 41 E. 47th St., New York, N. Y.

Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
 Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.
 MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
 Radio Craftsmen, Inc., 4401 N. Ravenswood Ave., Chicago 40, Ill.
 Sargent-Rayment Co., The, 1401 Middle Harbor Rd., Oakland 20, Calif.
 Shevers, Inc., Harold, 123 W. 64th St., New York 23, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.
 Weingarten Electronics Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.

TUNERS—Klystron

Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Philco Corp., Government & Industrial Div., 4700 Wisconsin Ave., Philadelphia 44, Pa.
 RAYTHEON MFG. CO., POWER TUBE DIV., Waltham 54, Mass., ADV. PG. 421.
 SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

TUNERS—Microwave**See MICROWAVE ACCESSORIES****TUNERS—Permeability**

Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
 C. G. S. LABORATORIES, INC., 391 Ludlow St., Stamford, Conn. ADV. PG. 558.
 Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
 Radio Condenser Co., Camden, N. J.

TUNERS—Television

Anchor Radio Co., 2215 S. St. Louis Ave., Chicago 23, Ill.
 Automatic Mfg. Corp., 65 Gouverneur St., Newark, N. J.
 DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.
 DX RADIO PRODUCTS CO., INC., 2300 W. Armitage Ave., Chicago 47, Ill. ADV. PG. 509.
 General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
 GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
 MAGNAVOX CO., THE, Components Div., Fort Wayne 4, Ind. ADV. PG. 328.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Oak Mfg. Co., 1260 Claybourn Ave., Chicago 10, Ill.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Radio Condenser Co., Camden, N. J.
 RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 434, 435.
 SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 276.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y.

TUNERS—Television rf

Anchor Radio Co., 2215 S. St. Louis Ave., Chicago 23, Ill.
 Blonder-Tongue Labs., Inc., 526-536 North Ave., Westfield, N. J.
 GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. ADV. PG. 291.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.

GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
Radio Condenser Co., Camden, N. J.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 276.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

TUNERS—uhf

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 575.
SARKES TARZIAN INC., 539 S. Walnut, Bloomington, Ind. ADV. PG. 276.

TUNING DEVICES—Receiver Mechanical

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. ADV. PG. 291.
Grisby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
Hycron Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
International Television Corp., 238 William St., New York 38, N. Y.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
Radio Condenser Co., Camden, N. J.
Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

TUNING DEVICES—Transmitter Mechanical

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Grisby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
Hycron Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 438, 439.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.

TURNTABLES—Recording and Transcription

Audio-Master Corp., 341 Madison Ave., New York 17, N. Y.
Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
Fairchild Recording Equipment Co., 154th St. & 7th Ave., Whitestone, N. Y.
Gates Radio Co., Quincy, Ill.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 271.
Q. R. K. Electronic Products, 445 N. Circle Drive, Fresno 4, Calif.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Rek-O-Kut Co., Inc., 38-03A Queens Blvd., Long Island City, N. Y.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

TWEETERS

See Speakers

ULTRASONIC EQUIPMENT

Refer to any of the following:

Gages, Ultrasonic Thickness Generators, Ultrasonic

VACUUM GAGES

See Gages, Vacuum or Pirani

TWISTS

See MICROWAVE ACCESSORIES
Bends—Microwave

VACUUM INDICATING, RECORDING AND CONTROL EQUIPMENT

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 610.
BOWSER TECHNICAL REFRIGERATION DIV., BOWSER, INC., Terryville, Conn. ADV. PG. 366, 367.
Bristol Co., The, Waterbury 20, Conn.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Consolidated Vacuum Corp., 735 Ridge Rd., W., Rochester 3, N. Y.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Hastings Instrument Co., Hampton 9, Va.
Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
MINNEAPOLIS-HONEWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Roberts Aves., Philadelphia 44, Pa. ADV. PG. 354, 355.
National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
Professional Electronics Co., 180 E. California St., Pasadena, Calif.
Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Pa.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
United Electric Controls Co., 85 School St., Watertown 72, Mass.
Vacuum Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
Wallace & Tiernan Products, Inc., Belleville 9, N. J.
Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.

VACUUM PUMPS

Beach-Russ Co., 50 Church St., New York 7, N. Y.
Central Scientific Co., 1700 Irving Park Road, Chicago 13, Ill.
Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
EISLER ENGINEERING CO., INC., 740 S. 13th St., Newark 3, N. J. ADV. PG. 332.
EITEL-McCULLOUGH INC., San Bruno, Calif. ADV. PG. 378, 379.
INTERNATIONAL PUMP & MACHINE WORKS, 11-13 Governor St., Newark 2, N. J. ADV. PG. 216.
KINNEY MFG. CO., 3529 Washington St., Boston, Mass. ADV. PG. 492.
Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
Nelson Vacuum Pump Co., Geo. F., 2133 Fourth St., Berkeley 10, Calif.
Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.
Stewart-Speller Associates, Soquel, Calif.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
U. S. Stoneware Co., Akron 9, Ohio.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.

VACUUM TUBE VOLTMETERS

See Voltmeters, Electronic

VACUUM UNITS

American Research Corp., P. O. Box 1121, Bristol, Conn.
BOWSER TECHNICAL REFRIGERATION DIV., BOWSER, INC., Terryville, Conn. ADV. PG. 366, 367.
Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 608.
High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. ADV. PG. 188-190.
National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
TENNEY ENGINEERING INC., 26 Avenue B, Newark 5, N. J. ADV. PG. 483.

Vacuum Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.

VALVES—Solenoid

Adel Div. of General Metals Corp., 10777 Van Owen St., Burbank, Calif.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 329.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.
Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 514.
SANDERS ASSOCIATES, Nashua, N. H. ADV. PG. 504.
Skinner Electric Valve Div., The Skinner Chuck Co., Edgewood Ave., New Britain, Conn.
Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
Vacuum Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.

VARISTORS

See also Crystal Mounts & Mixers

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 498.

VARNISH CAMBRIC COATINGS

VARNISH, INSULATING

See Insulating Compounds

VIBRATION ANALYSIS EQUIPMENT

Advanced Electronics, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BRISTOL ENGINEERING CORP., Lincoln Ave. & Pond St., Bristol 1, Pa. ADV. PG. 547.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
CALIDYNE CO., THE, P. O. Box 72, Winchester, Mass. ADV. PG. 463.
Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
DAVIES LABORATORIES, INC., THE, 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 522.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
Erwood, Inc., 1770 Berteau Ave., Chicago 13, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-18.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91.
Gerber Scientific Instrument Co., 89 Spruce St., Hartford 1, Conn.
GLENCO CORP., Metuchen, N. J. ADV. PG. 598.
Gulton Mfg. Corp., Metuchen, N. J.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 474.
Muirhead & Co., Ltd., Bechenham, Kent, England.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 624.
Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
Vibrascope Co., 6 E. 39th St., New York 16, N. Y.

VIBRATION ANALYSIS EQUIPMENT—

Electronic Balancing

Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind.
Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.

DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
 Gusholt Machine Co., 1245 E. Washington Ave., Madison 3, Wis.
 Gulton Mfg. Corp., Metuchen, N. J.
 Vibroscope Co., 6 E. 39th St., New York 16, N. Y.

**VIBRATION ANALYSIS EQUIPMENT—
 High Temperature Fatigue**

Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
DECADE INSTRUMENT CO., Box 535, Caldwell, N. J. ADV. PG. 516.
FINN & CO., INC., T. R., 333 Jackson Ave., New York 54, N. Y. ADV. PG. 623.
 Gulton Mfg. Corp., Metuchen, N. J.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 474.

**VIBRATION ANALYSIS EQUIPMENT—
 Vibration Fatigue**

All American Tool & Mfg. Co., 8027 Lawndale, Skokie, Ill.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
FINN & CO., INC., T. R., 333 Jackson Ave., New York 54, N. Y. ADV. PG. 623.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 474.
SEALTRON CO., 9701 Reading Rd., Cincinnati 15, Ohio. ADV. PG. 217.
 Tallier & Cooper Co., 75 Front St., Brooklyn 1, N. Y.

VIBRATION EXCITING EQUIPMENT

CALIDYNE CO., THE, P. O. Box 72, Winchester, Mass. ADV. PG. 463.
FINN & CO., INC., T. R., 333 Jackson Ave., New York 54, N. Y. ADV. PG. 623.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 568.
 Gulton Mfg. Corp., Metuchen, N. J.
 L. A. B. Corp., 31 Union Place, Summit, N. J.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 474.
 Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
 Rollin Co., 2010 N. Lincoln Ave., Pasadena 3, Calif.
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

VIBRATORS

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 119.
AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. ADV. PG. 278.
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Globe Industries, 125 Sunrise Place, Dayton 7, Ohio.
 Gulton Mfg. Corp., Metuchen, N. J.
 James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Senn Corp., New Augusta, Ind.
VICTOREEN INSTRUMENT CO., 5806 Hough Ave., Cleveland 3, Ohio. ADV. PG. 206, 207.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

VIBRATORS—Multivibrators

Acme Electronix Div., NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
 Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
DIGITAL PRODUCTS, INC., 7643 Fay St., La Jolla, Calif. ADV. PG. 589.
FRANKLIN ELECTRONICS, INC., 415 W. Pike St., Philadelphia 40, Pa. ADV. PG. 575.
WALKIRT CO., 145 W. Hazel, Inglewood, Calif. ADV. PG. 628.
 Wilson Co., H. A., 2655 Hwy. 22, Union, N. J.

VIBRATORS—Ultrasonic

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
GENERAL ELECTROSONICS, INC., 32 W. 22nd St., New York 10, N. Y. ADV. PG. 568.
 Gulton Mfg. Corp., Metuchen, N. J.
 Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.

VISCOSIMETERS WITH ELECTRONIC RECORDERS

Foxboro Co., The, Foxboro, Mass.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.

VOLTAGE REGULATING

See Controls

VOLTAGE SUPPLIES—Decade

BRISTOL ENGINEERING CORP., Lincoln Ave & Pond St., Bristol 1, Pa. ADV. PG. 547.
KEPCO LABS., INC., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 25-27.

VOLTMETERS

VOLTMETERS—Crystal

VOLTMETERS—Electronic
 See Instruments—Electrical Measuring

VOLTMETERS—Electrostatic

Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.
 Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 225.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 118.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 592.
SENSITIVE RESEARCH INSTRUMENT CORPORATION, 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
STICHT CO., INC., HERMAN H., 27 Park Place, New York 7, N. Y. ADV. PG. 627.

VOLTAGE REGULATORS & STABILIZERS

See Regulators, Voltage Regulators & Stabilizers

VOLT-OHM-MILLIAMMETERS

See Instruments—Electrical Measuring

WASHERS—Insulating

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 161.
 American Radio Hardware Co., Inc., 152 MacQueston Pkwy., Mt. Vernon, N. Y.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 107.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 21-24.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 618.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 408, 409.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
ELECTRONIC MECHANICS, INC., 101 Clifton Blvd., Clifton, N. J. ADV. PG. 485.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
 Felt Products Mfg. Co., 1504 West Carroll Ave., Chicago 7, Ill.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 145, 147.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.
 Glastic Corp., The, 1823 E. 40th St., Cleveland 3, Ohio.
 Hayden Mfg. Co., 173 N. Peoria St., Chicago 7, Ill.
 Houghton Laboratories Inc., 322 Bush St., Olean, N. Y.
 Huse Liberty Mica Co., 171 Camden St., Boston, Mass.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.

INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 Keystone Electronics Corp., 423 Browne St., New York 12, N. Y.
KIRCHBERGER & CO., INC., W., 1925 37th St., Brooklyn 18, N. Y. ADV. PG. 466.
 Lacoma Corp., 37 S. 6th St., Newark 7, N. J.
 Lamsky Die Cutting Corp., 1924a Green St., New York 12, N. Y.
 Lavelle Rubber Co., 424 N. Wood St., Chicago 22, Ill.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micacraft Products, Inc., 703 McCarter Highway, Newark 5, N. J.
 Minnesota Rubber & Gasket Co., 3030 Wooddale Ave., Minneapolis 16, Minn.
 Moore Co., Howard J., 206 William St., New York 38, N. Y.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 85, 86.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Pfeiffer Products, 3901 W. 54th St., Los Angeles, Calif.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
POLYMER CORP., The, Reading Pa. ADV. PG. 532.
RESISTOFLEX CORP., 39 Plansaer St., Belleville 9, N. J. ADV. PG. 583.
RICHARDSON CO., THE, 2767 Lake St., Melrose Park, Ill. ADV. PG. 489.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Sheffco Mfg. Co., 111 W. Roub Ave., Palisades Park, N. J.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 206 Seventh St., Bedford, Ind.
STUPAKOFF CERAMIC & MFG CO., Latrobe, Pa. ADV. PG. 247-250.
 Superior Steatite & Ceramic Corp., 82-49 Gate Ave., Long Island City 1, N. Y.
 Taylor Fibre Co., Norristown, Pa.
THOR CERAMICS INC., 225 Bellevue Ave., Bloomfield, N. J. ADV. PG. 453.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 530, 531.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.
 Wrought Washer Mfg. Co., 224 S. Bay St., Milwaukee 7, Wis.

WASHERS—Lock

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
 American Nut & Bolt Fastener Co., 2045 Duerr St., Pittsburgh 33, Pa.
 Atlas Screw & Specialty Co., 450 Broome St., New York 13, N. Y.
 Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Continental Screw Co., New Bedford, Mass.
 Eaton Mfg. Co., Reliance Div., Massillon, Ohio.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 394.
 Ferner Co., R. Y., 110 Pleasant St., Maiden, Mass.
 Garrett Co., Inc., George K. D. & Tioga Sts., Philadelphia 34, Pa.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 Harper Co., H. M., 8200 Lerign Ave., Morton Grove, Ill.
 Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 464.
 National Lock Washer Co., 40 Hermon St., Newark 5, N. J.
 Philadelphia Steel & Wire Corp., Penn. St. & Belfield Ave., Philadelphia, Pa.
 Positive Lock Washer Co., 181 Miller St., Newark 5, N. J.
 Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
 Ryerson & Sons, Inc., J. T. Box 8000-A, Chicago, Ill.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Shakeproof, Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
 Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.

Standard Locknut & Lockwasher, Inc., 510 N. Capitol Ave., Indianapolis, Ind.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
 Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, Ill.
 Thompson-Bremer & Co., 1644 W. Hubbard St., Chicago 22, Ill.
 Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
TITFLEX, INC., 500 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 427.
WAVELINE, INC., Box 470 Caldwell, N. J. ADV. PG. 628.
WORKSHOP ASSOCIATES DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 286.

American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.

WATTMETERS

See Instruments—Electrical Measuring

WAVEGUIDE TEST EQUIPMENT

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., Div. of The Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
 Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass.

WAVEGUIDES—Combination, Flexible & Rigid

See MICROWAVE ACCESSORIES

WAVEGUIDES—Straight

AIRTRON, INC., 1103 W. Elizabeth Ave., Linden, N. J. ADV. PG. 534.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 556.
BART LABS., CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 593.
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
COAXIAL CONNECTOR CO., 35 N. Second Ave., Mt. Vernon, N. Y. ADV. PG. 260.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
DALMO VICTOR CO., 1414 El Camino Real, San Carlos, Calif. ADV. PG. 191.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
 Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y.
GENERAL PRECISION LABORATORY, INC., 63 Bedford Rd., Pleasantville, N. Y. ADV. PG. 256.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, Conn.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
 Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
 Selector Industries, Inc., 401 E. 138th St., New York 54, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.

WAVEMETERS—Microwave

American Encaustic Tiling Co., Electronic Div., Lansdale, Pa.
 Bogart Mfg. Co., 315 Seigel St., Brooklyn 6, N. Y.
 Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 Decimeter, Inc., 1430 Market St., Denver 2, Colo.
 DeMornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
DOUGLAS MICROWAVE CO., INC., 338 E. 95th St., New York 28, N. Y. ADV. PG. 559.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 555.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
FREQUENCY STANDARDS, Box 504, Asbury Park, N. J. ADV. PG. 102.
GENERAL R-F FITTINGS CO., 702 Beacon St., Boston 15, Mass. ADV. PG. 446.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-34.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 400, 401.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 244, 245.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 419.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 228.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 110.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 55 Johnson St., Brooklyn 1, N. Y. ADV. PG. 122, 123.
 Radiation, Inc., Melbourne, Fla.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., Div. of the Sperry Corp., Great Neck, N. Y. ADV. PG. 283, 284.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 457.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 628.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

WAXES

See Insulating Compounds

WEDGES—Wood Slot

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.

WELDING

See Controls

WIRE (for Magnetic Recording)

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 374, 375.
 Fidelitone, Inc., 1616 Devon Ave., Chicago 26, Ill.
 Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.
 Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Ill.
 Permo, Inc., 6415 Ravenswood Ave., Chicago 26, Ill.
 Recordisc Corp., 395 Broadway, New York, N. Y.
 Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.

WIRE—Aluminum

ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
AMERICAN LEONIC MFG. CO., Amber & Hagert Sts., Philadelphia 25, Pa. ADV. PG. 591.

WIRE—Annunciator

ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Diamond Wire & Cable Co., Sycamore, Ill.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. 310.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Sequoia Process Corp., 881 Douglas Ave., Redwood City, Calif.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—Antenna

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank, Calif.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Dielectric Materials Co., 5315-17 North Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 JFD MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn N. Y. ADV. PG. 258, 623.
 National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—Asbestos Insulated

American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicolli St., New Haven 4, Conn.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

WIRE—Beryllium Copper

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 154.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

WIRE—Ceramic Insulated

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Riverside Metal Co., The, Riverside, N. J.
 U. S. Stoneware Co., Akron 9, Ohio.

WIRE—Copper, Bare

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
 Nonotuck Mfg. Co., Holyoke, Mass.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 SYLVANIA ELECTRIC PRODUCTS, Inc., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Telegraph Construction & Maintenance Co., Ltd., Telecon Works, Greenwich, London, S.E. 10, England.
 Warren Wire Co., Pownal, Vt.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Copper-Clad

Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

WIRE—Copper, Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
 Acme Wire Co., New Haven 14, Conn.
 ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritan Township, Plainfield, N. J. ADV. PG. 528.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., 63 Main St., Ansonia, Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank, Calif.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
 COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 CORMISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Electro Wire Service, 5 Beekman St., New York 7, N. Y.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
 GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 Jersey Specialty Co., Little Falls, N. J.
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 New England Electrical Works, Inc., Lisbon, N. H.
 Okonite Co., The, Canal St., Passaic, N. J.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rea Magnetic Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicolli St., New Haven 4, Conn.
 Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Sequoia Process Corp., 881 Douglas Ave., Redwood City, Calif.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
 SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
 TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Warren Wire Co., Pownal, Vt.
 Western Insulated Wire Co., 2425 E. 30th St., Los Angeles 58, Calif.
 Whitaker Cable Corp., Kansas City 16, Mo.
 WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

WIRE—Cut and Stripped

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
 AEPOLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Diamond Wire & Cable Co., Sycamore, Ill.
 DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 61.
 Electro Wire Service, 5 Beekman St., New York 7, N. Y.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
Royal Electric Co., Inc., Pawtucket, R. I.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
UNITED MFG. & SERVICE, 405 S. 6th St., Milwaukee 4, Wis. ADV. PG. 266.
U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Enamelled

Acme Wire Co., New Haven 14, Conn.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
Instrument Wire Co., Guilford, Conn.
Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
New England Electrical Works, Inc., Lisbon, N. H.
Paterson Magnet Wire Div., Overlakes Corp., 132 Beckwith Ave., Paterson, N. J.
Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 402.
Slepijan Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
Warren Wire Co., Pownal, Vt.

WIRE—Fine Wire Specialties

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
Acme Wire Co., New Haven 14, Conn.
ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
Carpenter Steel Co., Webb Wire Div., New Brunswick, N. J.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Copperweld Steel Co., Glassport, Pa.
DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 154.
Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
Holyoke Wire & Cable Co., Holyoke, Mass.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.
Instrument Wire Co., Guilford, Conn.
LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
New England Electrical Works, Inc., Lisbon, N. H.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.

WIRE—Glass Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
Acme Wire Co., New Haven 14, Conn.
ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 52, Mass. ADV. PG. 487.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
HITEMP WIRES, INC., 26 Wixsar Ave., Mineola, N. Y. ADV. PG. 454.
Holyoke Wire & Cable Co., Holyoke, Mass.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
Lenz Electric Mfg., 1751 North Western Ave., Chicago 47, Ill.
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.
Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Guy

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—High Voltage

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Dielectric Materials Co., 5315-17 North Ravenswood Ave., Chicago 40, Ill.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
Okonite Co., The Canal St., Passaic, N. J.
Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
Plastic Wire & Cable Corp., Jewett City, Conn.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—Hook-up

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
ALDEN PRODUCTS CO., 112 W. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
Holyoke Wire & Cable Co., Holyoke, Mass.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
Plastic Wire & Cable Corp., Jewett City, Conn.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 I. E. Manufacturing, 325 N. Hoyle Ave., Chicago 12, Ill.
INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
JFD MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn N. Y. ADV. PG. 258, 623.
 National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—Asbestos Insulated

American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

WIRE—Beryllium Copper

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 154.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

WIRE—Ceramic Insulated

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Riverside Metal Co., The, Riverside, N. J.
 U. S. Stoneware Co., Akron 9, Ohio.

WIRE—Copper, Bare

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
 Nonotuck Mfg. Co., Holyoke, Mass.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
SYLVANIA ELECTRIC PRODUCTS, Inc., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Telegraph Construction & Maintenance Co., Ltd., Telecon Works, Greenwich, London, S.E. 10, England.
 Warren Wire Co., Pownal, Vt.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Copper-Clad

Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

WIRE—Copper, Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
 Acme Wire Co., New Haven 14, Conn.
ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., 63 Main St., Ansonia, Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank, Calif.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Electro Wire Service, 5 Beekman St., New York 7, N. Y.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 Jersey Specialty Co., Little Falls, N. J.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 New England Electrical Works, Inc., Lisbon, N. H.
 Okonite Co., The, Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Plastic Wire & Cable Corp., Jewett City, Conn.
PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rea Magnetic Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
 Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Sequoia Process Corp., 881 Douglas Ave., Redwood City, Calif.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Warren Wire Co., Pownal, Vt.
 Western Insulated Wire Co., 2425 E. 30th St., Los Angeles 58, Calif.
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

WIRE—Cut and Stripped

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
AEPOLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Diamond Wire & Cable Co., Sycamore, Ill.
DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 61.
 Electro Wire Service, 5 Beekman St., New York 7, N. Y.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
 UNITED MFG. & SERVICE, 405 S. 6th St., Milwaukee 4, Wis. ADV. PG. 266.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Enameled

Acme Wire Co., New Haven 14, Conn.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Instrument Wire Co., Guilford, Conn.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
 New England Electrical Works, Inc., Lisbon, N. H.
 Paterson Magnet Wire Div., Overlakes Corp., 132 Beckwith Ave., Paterson, N. J.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 SECOND METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 402.
 Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Warren Wire Co., Pownal, Vt.

WIRE—Fine Wire Specialties

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
 Acme Wire Co., New Haven 14, Conn.
 ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Carpenter Steel Co., Webb Wire Div., New Brunswick, N. J.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Copperweld Steel Co., Glassport, Pa.
 DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 154.
 Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.
 Instrument Wire Co., Guilford, Conn.
 LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
 Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
 NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
 New England Electrical Works, Inc., Lisbon, N. H.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
 Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.

WIRE—Glass Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
 Acme Wire Co., New Haven 14, Conn.
 ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 52, Mass. ADV. PG. 487.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 454.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Lenz Electric Mfg., 1751 North Western Ave., Chicago 47, Ill.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicolli St., New Haven 4, Conn.
 Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Guy

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—High Voltage

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Dielectric Materials Co., 5315-17 North Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
 Okonite Co., The Canal St., Passaic, N. J.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicolli St., New Haven 4, Conn.
 Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—Hook-up

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
 ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 ALDEN PRODUCTS CO., 112 W. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.

FEDERAL TELEPHONE AND RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 JFD MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn N. Y. ADV. PG. 258, 623.
 National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—Asbestos Insulated

American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

WIRE—Beryllium Copper

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 154.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

WIRE—Ceramic Insulated

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Riverside Metal Co., The, Riverside, N. J.
 U. S. Stoneware Co., Akron 9, Ohio.

WIRE—Copper, Bare

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
 Nonotuck Mfg. Co., Holyoke, Mass.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 SYLVANIA ELECTRIC PRODUCTS, Inc., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Telegraph Construction & Maintenance Co., Ltd., Telecon Works, Greenwich, London, S.E. 10, England.
 Warren Wire Co., Pownal, Vt.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Copper-Clad

Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

WIRE—Copper, Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
 Acme Wire Co., New Haven 14, Conn.
 ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., 63 Main St., Ansonia, Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank, Calif.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
 COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Electro Wire Service, 5 Beekman St., New York 7, N. Y.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
 GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
 Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 Jersey Specialty Co., Little Falls, N. J.
 KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 New England Electrical Works, Inc., Lisbon, N. H.
 Okonite Co., The, Canal St., Passaic, N. J.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rea Magnetic Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
 Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Sequoia Process Corp., 881 Douglas Ave., Redwood City, Calif.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
 SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
 TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Warren Wire Co., Pownal, Vt.
 Western Insulated Wire Co., 2425 E. 30th St., Los Angeles 58, Calif.
 Whitaker Cable Corp., Kansas City 16, Mo.
 WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

WIRE—Cut and Stripped

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
 AEPOLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 585.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Diamond Wire & Cable Co., Sycamore, Ill.
 DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 61.
 Electro Wire Service, 5 Beekman St., New York 7, N. Y.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
 UNITED MFG. & SERVICE, 405 S. 6th St., Milwaukee 4, Wis. ADV. PG. 266.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Enameled

Acme Wire Co., New Haven 14, Conn.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Instrument Wire Co., Guilford, Conn.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
 New England Electrical Works, Inc., Lisbon, N. H.
 Paterson Magnet Wire Div., Overlakes Corp., 132 Beckwith Ave., Paterson, N. J.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 402.
 Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Warren Wire Co., Pownal, Vt.

WIRE—Fine Wire Specialties

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
 Acme Wire Co., New Haven 14, Conn.
 ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 436.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Carpenter Steel Co., Webb Wire Div., New Brunswick, N. J.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Copperweld Steel Co., Glassport, Pa.
 DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 154.
 Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.
 Instrument Wire Co., Guilford, Conn.
 LEE SPRING CO., INC., 32 Main St., Brooklyn 1, N. Y. ADV. PG. 324.
 Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
 NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
 New England Electrical Works, Inc., Lisbon, N. H.

North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 224.
 Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.

WIRE—Glass Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
 Acme Wire Co., New Haven 14, Conn.
 ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York, 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 52, Mass. ADV. PG. 487.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 454.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Lenz Electric Mfg., 1751 North Western Ave., Chicago 47, Ill.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
 Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 179.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Guy

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.
 INSULINE CORP. OF AMERICA, 36-02 35th Ave., Long Island City, N. Y. ADV. PG. 535.
 JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—High Voltage

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Dielectric Materials Co., 5315-17 North Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.
 Okonite Co., The Canal St., Passaic, N. J.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
 Roebbling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.

WIRE—Hook-up

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
 ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
 ALDEN PRODUCTS CO., 112 W. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 258, 623.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 PLASTOID CORP., 42-61 24th St., Long Island City 1, N. Y. ADV. PG. 229.
 REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.

Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Sequoia Process Corp., 881 Douglas Ave., Redwood City, Calif.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Warren Wire Co., Pownal, Vt.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Litz

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 452.
 Holyoke Wire & Cable Co., Holyoke, Mass.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Instrument Wire Co., Guilford, Conn.
 National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
 New England Electrical Works, Inc., Lisbon, N. H.
 Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
 Slepian Co., Arthur 2 Burroughs St., Bridgeport, Conn.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346.

WIRE—Magnet

Acme Wire Co., New Haven 14, Conn.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-18.
HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 454.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Instrument Wire Co., Guilford, Conn.
 Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.
KELLOGG SWITCHBOARD & SUPPLY CO., 6650 S. Cicero Ave., Chicago 38, Ill. ADV. PG. 568.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
 New England Electrical Works, Inc., Lisbon, N. H.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
 Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
 Rockbestos Products Corp., 285 Nicoll St., New Haven 4, Conn.
 Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Slepian Co., Arthur 2 Burroughs St., Bridgeport, Conn.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Warren Wire Co., Pownal, Vt.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 346.

WIRE—Metal Shielded

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Holyoke Wire & Cable Co., Holyoke, Mass.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark N. J. ADV. PG. 613.
 Okonite Co., The Canal St., Passaic, N. J.
 Precision Tube Co., Inc., North Wales, Pa.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
 Uniform Tubes, Level Rd., Collegeville 2, Pa.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

WIRE—Molybdenum

Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
 Instrument Wire Co., Guilford, Conn.
 Murex, Ltd., Rainham, Essex, England.
 North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.

WIRE—Nickel Clad Copper

ALLOY METAL WIRE CO., 13th & Penna. Ave., Prospect Park, Pa. ADV. PG. 526.
 Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
 Standard Metals Corp., 262 Broad St., North Attleboro, Mass.

WIRE—Phosphor Bronze

Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
AMERICAN BRASS CO., 414 Meadow St., Waterbury 20, Conn. ADV. PG. 433.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Bridgeport Brass Co., 30 Grant St., Bridgeport, Conn.
 Chase Brass and Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.

HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Little Falls Alloys, Inc., 190 Caldwell Ave. Paterson 1, N. J.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613
 Phosphor Bronze Corp., 20 Franklin St., Seymour, Conn.
 Riverside Metal Co., The, Riverside, N. J.

WIRE—Plastic Insulated

Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
ADVANCE INSULATED WIRE & CABLE CO., INC., 10 Tingley Lane, Raritown Township, Plainfield, N. J. ADV. PG. 528.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 204, 205.
 Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 111.
 American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., 63 Main St. Ansonia, Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BIRNBACH RADIO CO., INC., 145 Hudson St., New York 13, N. Y. ADV. PG. 581.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 487
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 308, 309.
CAROL CABLE DIV. OF CRESCENT CO., INC., Front & Central Ave., Pawtucket, R. I. ADV. PG. 323.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 275.
 Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank, Calif.
 Columbia Wire Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 480.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
 Electro Wire Service 5 Beekman St., New York 7, N. Y.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CORP., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 148-153.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Holyoke Wire & Cable Co., Holyoke, Mass.
 Jersey Specialty Co., Little Falls, N. J.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.
 Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 310.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York 5, N. Y.
 Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
 Plastic Wire & Cable Corp., Jewett City, Conn.
PLASTOID CORP., 42-61 24th St., Long Island City 1 N. Y. ADV. PG. 229.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
REGO INSULATED WIRE CO., 830 Monroe St., Hoboken, N. J. ADV. PG. 356.
REX CORP., 51 Lansdowne St., Cambridge 39, Mass. ADV. PG. 511.
 Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
 Rockbestos Products, 285 Nicoll St., New Haven 4, Conn.
 Roebling's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 44.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Sequoia Process Corp., 881 Douglas Ave., Redwood City, Calif.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
SURPRENANT MFG CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 622.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., Akron 9, Ohio.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 456.

WIRE—Platinum

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 613.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J. Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Bishop & Co., J., Platinum Works, Malvern, Pa. Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
 Handy & Harman, 82 Fulton St., New York 38, N. Y.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
SECON METALS CORP., 228 E. 45th St., New York 17, N. Y. ADV. PG. 402.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros., Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., The, 2655 Hwy. 22, Union, N. J.

WIRE—Precious Metal Plated

See Wire—Silver Plated

WIRE—Resistance and Filament

ALLOY METAL WIRE CO., 13th & Penna. Ave., Prospect Park, Pa. ADV. PG. 526.
 AMERICAN LEONIC MFG. CO., Amber & Hagert Sts., Philadelphia 25, Pa. ADV. PG. 591.
 Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
DRIVER CO., WILBUR B., 150 Riverside Ave., Newark 4, N. J. ADV. PG. 154.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
 Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.
JELLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. ADV. PG. 573.
 Kanthal Corp., Amelia Pl., Stamford, Conn.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 260.
 North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E., 10, England.

WIRE—Silver Plated

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 257.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
 Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 88.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 93.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
 North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.

Standard Metals Corp., 262 Broad St., North Attleboro, Mass.
SURPRENANT MFG. CO., 199 Washington St., Boston 8, Mass. ADV. PG. 519.
 Wilson Co., H. A., The, 2655 Hwy. 22, Union, N. J.

WIRE—Stainless Steel

ALLOY METAL WIRE CO., 13th and Penna. Ave., Prospect Park, Pa. ADV. PG. 526.
 AMERICAN LEONIC MFG. CO., Amber & Hagert Sts., Philadelphia 25, Pa. ADV. PG. 591.
 American Steel & Wire Co., Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
 Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
 Carpenter Steel Co., Webb Wire Div., New Brunswick, N. J.
 Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.
DRIVER CO., WILBUR B., 150 Riverside Ave., Newark, N. J. ADV. PG. 154.
DRIVER-HARRIS CO., 201 Middlesex St., Harrison, N. J. ADV. PG. 281.
 Fidelitone, Inc., 1616 Devon Ave., Chicago 26, Ill.
 Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.
 Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 613.
 Peirce Wire Recorder Corp., 1328 Sherman Ave., Evanston, Ill.
 Republic Steel Corp., Republic Building, Cleveland 1, Ohio.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E., 10, England.

WIRE—Tantalum

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
 Murex Ltd., Rainham, Essex, England.

WIRE—Tungsten

Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
FANSTEEL METALLURGICAL CORP., 2200 Sheridan Rd., North Chicago, Ill. ADV. PG. 116.
 Murex Ltd., Rainham, Essex, England.
 North American Phillips Co., 100 E. 42nd St., New York 17, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 654-660.

WIRE MARKING—Service

Burndy Engineering Co., Inc., Norwalk, Conn.
IRVINGTON VARNISH & INSULATOR CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 64, 65.
MARKWIK MFG. CO., INC., 2270 Bruckner Blvd., Bronx 61, N. Y. ADV. PG. 554.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 445.

WIRE STRIPPERS—Chemical

Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Ellanar Chemical Co., 2308 Oakton St., Evanston, Ill.
 Enthone, Inc., 442 Elm St., New Haven 2, Conn.
 Fidelity Chemical Products Co., 472 Frelinghuysen Ave., Newark, N. J.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 London Chemical Co., 325 W. 32nd St., Chicago 16, Ill.

WIRE STRIPPERS—Machine

See Machines, Wire Stripping

WOOFERS

See Speakers

X-RAY EQUIPMENT—Industrial

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
BRACKE-SEIB X-RAY CO., INC., 293 Third Ave., New York 10, N. Y. ADV. PG. 566.
 Central Research Laboratories, Inc., Red Wing, Minn.
CENTURY METALCRAFT CORP., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. ADV. PG. 573.
 High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
 North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 St. John X-Ray Laboratory, Califon, N. J.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Triplett & Barton, Inc., 831 N. Lake St., Burbank, Calif.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

X-RAY EQUIPMENT—Medical

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
BRACKE-SEIB X-RAY CO., INC., 293 Third Ave., New York 10, N. Y. ADV. PG. 566.
 High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 385.
 North American Phillips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Nuclear Research & Development, Inc., 1094 Sutter Ave., St. Louis 5, Mo.
 Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

YOKES—DEFLECTION

Alpha Electronics, Inc., Route No. 17, Ramsey, N. J.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 470, 471.
CHICAGO TRANSFORMER DIV., ESSEX WIRE CORP., 3501 Addison St., Chicago 18, Ill. ADV. PG. 468.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
CROWLEY & CO., INC., HENRY L., 1 Central Ave., West Orange, N. J. ADV. PG. 303.
DX RADIO PRODUCTS CO., INC., 2300 Armitage Ave., Chicago 47, Ill. ADV. PG. 509.
 DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.
 Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 253.
GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 414.
I-T-E CIRCUIT BREAKER CO., 19th & Hamilton Sts., Philadelphia 30, Pa. ADV. PG. 396.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 Mullard Overseas Ltd., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Penn Tran Corp., Bellefonte, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 420.
 Roia Co., Inc., 2530 Superior Ave., Cleveland 14, Ohio.
 Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
 Senn Corp., New Augusta, Ind.
SICKLES, F. W., DIV., GENERAL INSTRUMENT CORP., 165 Front St., Chicopee, Mass. ADV. PG. 357.
 T V Products Corp., 907 E. 23rd St., Paterson, N. J.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Teletron Co., The, 4019 Prospect Ave., Cleveland 3, Ohio.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
TEL-RAD MFG. CO., INC., 7th & Madison St., Fennimore, Wis. ADV. PG. 620.
 Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
TRIAD TRANSFORMER MFG. CO., 4055 Redwood Ave., Los Angeles, Calif. ADV. PG. 394.

TRADE NAME INDEX

The following list of trade names of manufacturers and products in or related to the field of electronics has been prepared from data supplied by manufacturers. This list is intended for use in determining the manufacturer's name when only a purported trade name is known. The editors for obvious reasons have not attempted to determine a manufacturer's right to the exclusive use of any such name. Addresses can be obtained by referring to the Manufacturers Index on Page D-169. Only coined trade names are listed, as it was deemed unnecessary to include a company name inasmuch as the manufacturer's identity was immediately apparent.

- A-10**
Surprenant Mfg. Co.
- "A" NICKEL**
International Nickel Co., Inc.
- A BAR E**
Amalgamated Electronics
- ABRASO**
Roebling's Sons Co., John A.
- ABSORB-A-SHOCK**
Federal Shock Mount Corp.
- ACA**
Amplifier Corp. of America
- ACCURAY**
Industrial Nucleonics Corp.
- ACCWIRE**
Accurate Insulated Wire Corp.
- ACE**
American Hard Rubber Co.
- ACE**
Arro Expansion Bolt Co.
- ACME**
Aerovox Corp.
- ACME-LITE**
Acme Battery Co.
- ACME-MOLD**
Acme Wire Co.
- ACOUSTIC TAPE**
Jensen Industries, Inc.
- ACOUSTICEL**
Brush Electronics Co.
- ACRAWAX C**
Glyco Products Co., Inc.
- ACROCEL**
Acromark Co.
- ACROCUT**
Acromark Co.
- ACROBOSS**
Acromark Co.
- ACROD**
Acme Electric Heating Co.
- ACRODIE**
Acromark Co.
- ACRO-ETCH**
Acromark Co.
- ACROFLEX**
Anchor Plastics Co., Inc.
- ACROGRAVE**
Acromark Co.
- ACROHEX**
Acromark Co.
- ACRO-INK**
Acromark Co.
- ACROM**
Acme Electric Heating Co.
- ACROMARKER**
Acromark Co.
- ACROPLAC**
Acromark Co.
- ACROPRENE**
Acromark Co.
- ACROPRINTER**
Acromark Co.
- ACROSOUND**
Acro Products Co.
- ACROSTAMP**
Acromark Co., The
- ACROTOOL**
Acromark Co.
- ACROVISION**
Acro Products Co.
- ACRYWELD**
American Phenolic Corp.
- ACTONE**
Acton Co., H. W.
- ACTRON**
Radionic Transformer Co.
- ADAPEC**
Centralab Div. of Globe-Union, Inc.
- ADAPTORS**
ABC Radio Labs.
- ADASHAFT**
Centralab Div. of Globe-Union, Inc.
- AD-A-SWITCH**
Clarostat Mfg. Co., Inc.
- ADC**
Audio Development Co.
- ADDAPLUG**
Associated Engineering Corp. of Boston
- ADJUST-A-CONE**
Quam Nichols Co.
- ADJUST-A-VOLT**
Standard Electrical Products Co.
- ADJUSTOHM**
Ward Leonard Electric Co.
- ADLAKE**
Adams & Westlake Co.
- ADVANCE**
Acme Battery Co.
- ADVANCETRON**
Advance Electronics Co.
- ADVANCE**
Driver-Harris Co.
- AEC**
American Electroneering Co.
- AECO**
American Electric Cable Co.
- AERIOTRON**
Westinghouse Electric Corp.
- AEROCOM**
Aeronautical Communications Equipment Co.
- AEROCON**
Aerovox Corp.
- AERO-GUN**
Shallcross Mfg. Co.
- AEROFILM**
Aerovox Corp.
- AEROFLEX**
Anchor Industrial Co.
- AEROFLEX**
Anchor Plastics Co., Inc.
- AEROHEAD**
Giannini & Co., Inc., G. M.
- AEROLENE**
Aerovox Corp.
- AEROLITE**
Aerovox Corp.
- AERO-MAGNETTE**
Heinemann Electric Co.
- AEROSEAL**
Breeze Corpn., Inc.
- AEROTEMP**
Aerovox Corp.
- AERO-THREAD**
Heli-Coil Corp.
- AEROTROL**
Cook Electric Co.
- AEROTRON**
Aeronautical Electronics, Inc.
- AEROVANE**
Friez Instrument Div., Bendix Aviation Corp.
- A'G'A'**
Elastic Stop Nut Corp of America
- AGASTAT**
Elastic Stop Nut Corp. of America
- AGWADAG**
Acheson Colloids Corp.
- AH**
Arrow-Hart & Hegeman Electric Co.
- AICO**
Aeromotive Equipment Corp.
- AIRACOUSTIC**
Johns-Manville Sales Corp.
- AIRBOY**
American Insulator Corp.
- AIR COM**
Mitchell Industries, Inc.
- AIRFLEX**
Transradio Ltd.
- AIR GENERAL**
Brach Mfg. Corp.
- AIRGRIT**
Matthews & Co., James H.
- AIR INDUCTORS**
Barker & Williamson
- AIR KING**
Ward Products Corp.,
Div. The Gabriel Co.
- AIR-METER**
Hastings Instrument Co.
- AIR-RAY**
Edin Co.
- AIRSCOOT**
Mitchell Industries, Inc.
- AIR SPECIAL**
Brach Mfg. Corp.
- AIRSTAT**
Minneapolis-Honeywell Regulator Co.
- AIRSWITCH**
Minneapolis-Honeywell Regulator Co.
- AIRTURN**
Barber-Colman Co.
- AKRA-OHM**
Shallcross Mfg. Co.
- ALATHON**
du Pont de Nemours & Co., Inc., E. I.
- ALCOA**
Aluminum Company of America
- ALCROHM**
Magnetic Metals Co.
- ALCUPLATE**
Metals & Controls Corp.
General Plate Div.
- ALFER**
Metals & Controls Corp.,
General Plate Div.
- ALFERON**
Driver-Harris Co.
- ALGCO**
Auburn Manufacturing Co.
- ALL-HYDRAULIC**
Hydraulic Press Mfg. Co.
- ALL-METL**
Barry Corp.
- ALLEN-HEAD**
Allen Mfg. Co.
- ALLIED**
Sheldon Electric Co.
- ALMANOX**
Frenchtown Porcelain Co.
- ALMET**
Alloy Metal Wire Co.
- ALNICO**
Arnold Engineering Co.
- ALNICO**
Crucible Steel Co. of America
- ALNIFER**
Metals & Controls Corp.,
- ALNOR**
Illinois Testing Labs., Inc.
- ALODINE**
American Chemical Paint Co.
- ALPHATRON**
Canadian Radium & Uranium Corp.
- ALPHATRON**
National Research Corp.
- ALPO**
Standard-Toch Chemicals, Inc.
- ALRAY**
Alloy Metal Wire Co.
- ALROK**
Aluminum Co. of America
- ALSCO**
Automatic Switch Co.
- ALSIMAG**
American Lava Corp.
- ALSIPLATE**
Metals & Controls Corp.
General Plate Div.
- ALUMATREET**
Farrelloy Co.
- ALUMAWELD**
Johnson Mfg. Co., Inc.
- ALUMILITE**
Aluminum Co. of America
- ALUMON**
Enthone, Inc.
- ALUMOX**
Enthone, Inc.
- ALUNDUM**
Norton Co.
- ALZAK**
Aluminum Co. of America
- AMINCO**
American Instrument Co.
- ALUNDUM**
Norton Co.
- AMBERYL**
Vaco Products Co.
- AMCO**
American Solder & Flux Co.
- AMCON**
American Condenser Co.
- AMECO**
American Electronics Corp.
- AMELCO**
American Electroneering Corp.
- AMERBESTOS**
American Steel & Wire Co.,
U. S. Steel Corp., Sub.
- AMERCLAD**
American Steel & Wire Co.,
U. S. Steel Corp., Sub.
- AMERFLEX**
Marco Industries
- AMERGLASS**
American Steel & Wire Co.,
U. S. Steel Corp., Sub.
- AMERICAN**
Manning, Maxwell & Moore, Inc.
- AMERICAN BEAUTY**
American Electrical Heater Co.
- AMERICAN-PHILLIPS**
American Screw Co.
- AMERINE**
American Insulator Corp.
- AMERLAC**
American Electric Cable Co.
- AMERPLASTIC**
American Electric Cable Co.
- AMERSTRAND**
American Steel & Wire Co.,
U. S. Steel Corp., Sub.
- AMERTRAN**
Standard Electronics Corp.
- AMETRON**
Streeter-Amet Corp.
- AMINC**
Dumont-Airplane & Marine Instruments,
Inc.
- AMINCO**
American Instrument Co.
- AMMOGAS**
Westinghouse Electric Corp.
- AMO**
General Cement Mfg. Co.
- AMO-ENO-MONO GAS**
Westinghouse Electric Corp.
- AMOIL**
Consolidated Vacuum Corp.
- AMPACET**
American Molding Powder &
Chemical Corp.
- AMPCO**
Automatic Metal Products Co.
- AMPEC**
Centralab Div.
Globe Union, Inc.
- AMPEX**
Automatic Metal Products Co.
- AMPHENOL**
American Phenolic Corporation
- AMPLICALL**
Rauland-Borg Corp.
- AMPLICORP**
Amplifier Corp. of America
- AMPLIFILM**
Aircraft-Marine Products, Inc.
- AMPLIMUSE**
Crystal Research Labs., Inc.
- AMPLI-PRESS**
Aircraft-Marine Products, Inc.
- AMPLISET**
Bristol Co., The
- AMPLIVERTER**
Blonder-Tongue Laboratories, Inc.
- AMPLUG**
Electrodyne Co.
- AMP-O-LECTRIC**
Aircraft-Marine Products, Inc.
- AMPOLEX**
Aircraft-Marine Products, Inc.
- AMP-U-MATIC**
Aircraft-Marine Products, Inc.
- AMPROBE**
Pyramid Instrument Corp.
- AMPTROL**
Friez Instrument Div.
Bendix Aviation Corp.
- AMPYROL**
American Steel & Wire Corp.,
U. S. Steel Corp., Sub.

AMRECON
 American Relay & Controls, Inc.

AMVAR
 American Steel & Wire Co.,
 U. S. Steel Corp., Sub.

ANACONDA
 American Brass Co.

ANGLE DRIVE
 James Vibrapowr Co.

ANGLGEAR
 Airborne Accessories, Inc.

ANKOSEAL
 Ansonia Wire & Cable Co.

ANNOUNCE-A-LARM
 Dondar Devices

ANTEN-A-CATOR
 Gordon Specialties Co.

ANTENNAPLEX
 Radio Corp. of Amerlca

ANTENNASCOPE
 Eldico of New York, Inc.

ANTENSIFIER
 Blonder-Tongue Laboratories, Inc.

ANTI-LINK
 American Nut & Bolt Fastener Co.

ANYVOLT
 Sorensen & Co.

APACHE
 Sangamo Electric Co.

APECO
 American Photocopy Equipment Co.

APELCO
 Applied Electronics Co.

API
 Assembly Products, Inc.

APW
 American Platinum Works

AQUADAG
 Acheson Colloids Co.

AQUALITE
 National Vulcanized Fibre Co.

AQUALUX
 Westinghouse Electric Corp.

AQUAPLATE
 Bache & Co., Semon

AQUATRATOR
 Precision Scientific Co.

AQUATROL
 Minneapolis-Honeywell Regulator Co.

AQUIFLUX
 Special Chemicals Co.

A. R. C.
 Aircraft Radio Corp.

ARALDITE
 Ciba Company, Inc.

ARAX
 Multicore Solders Ltd.

ARGYLINE
 Argyle Electronics Co.

ARHCO
 American Radio Hardware Co., Inc.

ARISTOCRAT I, II
 Electro-Voice, Inc.

ARKLESS
 Economy Fuse & Mfg. Co.

ARL
 Applied Research Labs.

ARLAVOX
 Radionic Transformer Co.

ARMATITE
 Mica Insulator Co.

ARMATURO
 Johns-Manville

ARMITE
 Spaulding Fibre Co., Inc.

ARRESTONE
 Armstrong Cork Co.

ARROWHEAD
 Sangamo Electric Co.

ARTIC-GLO
 Canadian Radium & Uranium Corp.

ASARCO-LO
 Federated Metals Div.
 American Smelting & Refining Co.

ASBESTOSPAK
 Felt Products Mfg. Co.

ASCO
 Automatic Switch Co.

ASCOPE
 Applied Science Corp. of Princeton

ASENCO
 Associated Engineering & Mfg. Corp.

ASHCROFT
 Manning, Maxwell & Moore, Inc.

ASTRA-SONIC
 The Pentron Corp.

ATC
 Automatic Temperature Control Co.,
 Inc.

ATCOTRAN
 Automatic Temperature Control Co., Inc.

ATCOTRONIC
 Automatic Temperature Control Co., Inc.

ATLAS
 U. H. F. Resonator Corp.

ATOMS
 Sprague Electric Co.

ATOMER
 Maico Co., Inc.

ATR
 American Television & Radio Co.

ATTIC-V-BEAM
 Telrex, Inc.

AUBESTON
 Auburn Manufacturing Co.

AUC
 Rockbestos Products Corp.

AUDAX
 Audak Co.

AUDET
 Centralab Div. of
 Globe-Union, Inc.

AUDIAD
 Magnecord, Inc.

AUDICLE
 Sonotone Corp.

AUDIGAGE
 Branson Instruments, Inc.

AUDIO-AID
 Ansley Mfg. Co., Arthur

AUDIODISCS
 Audio Devices, Inc.

AUDIOFILM
 Audio Devices, Inc.

AUDIOID
 Cook Laboratories

AUDIOLOG
 Berlant Associates

AUDIOM
 Goodmans Industries, Ltd.,
 Axiom Works

AUDIO MIX
 Pentron Corp., The

AUDIOSCOPE
 Audio-Master Corp.

AUDIOSCOPE
 Sonotone Corp.

AUDITORIUM
 Jensen Mfg. Co.

AUDITRON
 Sonotone Corp.

AUDIO-LINE
 Audio Equipment Sales

AUDIPOINTS
 Audio Devices, Inc.

AUDIO RULE
 Audio Equipment Sales

AUDIOTAPE
 Audio Devices, Inc.

AUDITION
 Reeves Soundcraft Corp.

AUIGATOR
 Mitchell Industries, Inc.

AUOMETERS
 British Industries Corp.

AURICON
 Berndt-Bach, Inc.

AUTELCO
 Automatic Electric Sales Corp.

AUTOCOUPLER
 Industrial Television, Inc.

AUTOCROMATIC
 Acton Co., H. W.

AUTO-DIAL
 American Phenolic Corp.

AUTODYNE
 Westinghouse Electric Corp.

AUTOGRIP
 Magnasync Mfg. Co.

AUTOMANIC
 Premax Products Div.
 Chisolm-Ryder Co., Inc.

AUTOMATIC TERMINATOR
 Aircraft-Marine Products, Inc.

AUTOMIX
 Westinghouse Electric Corp.

AUTOPLATER
 Tracerlab, Inc.

AUTOSCALER
 Tracerlab, Inc.

AUTOSET
 Bristol Co., The

AUTO-SONIC
 Vendo Co.

AUTOSYN
 Eclipse-Pioneer Div.
 Bendix Aviation Corp.

AUTOTROL
 Westinghouse Electric Corp.

AUTOTUNE
 Collins Radio Co.

AUTOVALVE
 Westinghouse Electric Corp.

AUTRATAT
 Ward Leonard Electric Co.

AVIEN
 Aviation Engineering Corp.

AVIGATOR
 Mitchell Industries, Inc.

AVITRON
 Avion Instrument Corp.
 Div. of American Car & Foundry Co.

AXIFLO
 Westinghouse Electric Corp.

AXIOHM
 Ward Leonard Electric Co.

AXIOM
 Goodmans Industries, Ltd.

AXIVANE
 Joy Mfg. Co.

A-Z
 Plastic Wire & Cable Corp.

AZTEC
 Sangamo Electric Co.

B-2
 Peck & Harvey

BCE
 Berkeley Custom Electronics

B.S.R.
 Birmingham Sound Reproducers, Ltd.

BAACH-INTERNATIONAL
 International Machine Works

BADGER
 Reliance Automatic Lighting Co.

BAKELITE
 Union Carbide & Carbon Co.

BALAC
 Conant Laboratories

BALANCED BEAM
 Precise Measurements Co.

BALINE
 J F D Mfg. Co., Inc.

BALOWSTER
 F. G. Back Video Corp.

BANTAM
 Aerovox Corp.

BANTAM GT
 Hytron Radio & Electronics Co.
 A Division of Columbia Broadcasting
 System, Inc.

BANTAM JR
 Hytron Radio & Electronics Co.
 A Division of Columbia Broadcasting
 System, Inc.

BARANM
 Ward Leonard Electric Co.

BARCOL
 Barber Colman Co.

BARCOMBO
 Electronic Enterprises, Inc.

BAREX
 King Laboratories, Inc.

BAROHM
 Ward Leonard Electric Co.

BARONET
 Electro-Voice, Inc.

BARREL-LIFT
 Falstrom Co.

BARRYMOUNTS
 Barry Corp., The

BAT-WING
 Telrex Inc.

BASS REFLEX
 Jensen Mfg. Co.

BATTERY-SCOPE
 McColpin-Christie Corp.

BATRYPOWER
 Radiart Corp.

BAT'S-EYE RADARECTOR
 Kennedy & Co., D. S.

BEACHCOMER
 JFD Mfg. Co., Inc.

BEACON
 Esso Standard Oil Co.

BEAM
 Camburn, Inc.

BEAMA JUSTER
 Perfection Electric Co.

BEAVER
 Cornell-Dubilier Electric Corp.

BECKAMINE
 Reichhold Chemicals, Inc.

BECCO
 Brown Electro-Measurement Corp.

BECCO
 Westinghouse Electric Corp.

BEE
 Buchanan Electrical Products Corp.

BEE LINE
 Radio Merchandise Sales, Inc.

BEEBLE
 American Cyanamid Co.

BELCAP
 Sprague Electric Co.

BELCO
 Bogue Electric Mfg. Co.

BELCON
 Bogue Electric Mfg. Co.

BELFONE
 Bell Sound Systems, Inc.

BELFONE MESTRO
 Bell Sound Systems, Inc.

BELLOWS
 Boots Aircraft Nut Co.

BELL-TIME
 Industrial Timer Corp.

BEN HAR
 Bentley-Harris Mfg. Co.

BENELEX
 Masonite Corp.

BEPCO
 Buchanan Electrical Products Corp.

BERCO BRAND
 Bergen Wire Rope Co.

BERGER
 Republic Steel Corp.

BERKELEY DECIMAL
 Berkeley Scientific Co.

BERKSHIRE
 Radio Corporation of America

BERYLCO
 Beryllium Corp.

BESTPRODUCTS
 Beam Instruments Corp.

BESTO-WIRE
 Rhode Island Insulated Wire Co.

BETTER LIVING
 Sonotone Corp.

BH
 Bentley-Harris Mfg. Co.

B.I.W.
 Boston Insulated Wire & Cable Co.

BIMORPH
 Brush Electronics Co.

BI-PRENE
 Bishop Mfg. Corp.

BI-SEAL
 Bishop Mfg. Corp.

BI-SILON
 Bishop Mfg. Corp.

BK
 Barrett Varnish Co.

BL
 Browning Laboratories, Inc.

BLACK ARROW
 Sangamo Electric Co.

BLACK BEAUTY
 Sprague Electric Co.

BLACK DIAMOND
 Dunton Co., M. W.

BLACKLINE
 Frederick Post Co.

BLUE JACKET
 Sprague Electric Co.

BLUE SHAFT
 Centralab Div. of Globe-Union, Inc.

BLUE STREAK
 American Electric Cable Co.

BLUE STREAK
 Paragon-Revolute Corp.

BLUEBIRD
 Radio Corporation of America

B. O. ELIMINATOR
 Perfection Electric Co.

BOARDMASTER
 Universal Drafting Machine Corp.

BONALLOY
 Bonney Forge & Tool Works

BOND
 Olin Industries, Inc.

BONDEZE
 Phelps Dodge Copper Products Co.

BONDOLITE
 Goodyear Aircraft Corp.

BOND-ROD
 Sherman Mfg. Co., H. B.

BONDWICH
 Metals & Controls Corp.,
 General Plate Div.

BOR-AL-SIL
 Bird Co., Richard H.

BOVIE
 Liebel-Flarsheim Co.

BOW XX
 Super Flow Solder Co., Inc.

BOWTIE-FLECTOR
 J F D Mfg. Co., Inc.

BOXSEAL
 Paisley Products Inc.

BOY-MAR
 Electrical Service Co.

BRADLEY
 De Jur-Amsco Corp.

BRANDES
 Cannon Co., C. F.

BRAZE-CLAD
 American Silver Co., Inc.

BRAZO
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.

BRENKERT
 Radio Corp. of America

BRIDGAMATIC
 SOS Cinema Supply Corp.

BRIDGER
 Audio Instrument Co., Inc.

BRILLIANTONE
 Acton Co., H. W.

BRIMAR
 Standard Telephones & Cables, Ltd.

BRINELCO
 Brinell Co., The

BRISTO
 Bristol Co., The

BROADBAND
 Racon Electric Co.

BROADCASTER
 Reeves Soundcraft Corp.

BRONCO
 Metals & Controls Corp.
 General Plate Div.

BRONCO
 Western Insulated Wire Co.

BRONZOCHROME
 Eutectic Welding Alloys Co.

BROWN DEVIL
 Ohmite Mfg. Co.

BROWN HILL
 R-F Electronics, Inc.

BRYANT
 Westinghouse Electric Corp.

BUDGET
 Aircraft Marine Products Inc.

BUG
 Vibroplex Co., Inc.

BUILT IN WATCHMAN
 Westinghouse Electric Corp.

BULLDOG
 Phelps Dodge Copper Products Corp.

BULLS-I-UNITS
 Kirkland Co., H. R.

BULPLATE
 Herlec Corp.

BULPLATE
 Sprague Electric Co.

BUSHEND
 Buchanan Electrical Products Corp.

BUSS
 Bussman Mfg. Co.

BUTACITE
 du Pont de Nemours Co., Inc., E. I.

BUTTON
 Erie Resistor Corp.

B&W
 Barker & Williamson

BUZZ-TIME
 Industrial Timer Corp.

BW COPYFLEX
 Bruning Co., Inc., Charles

- C-B**
Caddell-Burns Mfg. Co.
- CCC**
Chicago Condenser Corp.
- C & C**
McColpin-Christie Corp.
- C-D-F**
Continental-Diamond Fibre Co.
- CMSZ ALLOY**
Electro Metallurgical Co.
Unit of Union Carbide & Carbon Corp.
- CADAC**
Computer Research Corp.
- CAE**
Canadian Aviation Electronics, Ltd.
- CAGEPHONE**
Farmers Engineering & Mfg. Co.
- CALI-BRIDGE**
Industrial Electronics, Inc.
- CALI-POWER**
Industrial Electronics, Inc.
- CALIVOLTER**
Caldyne Co., The
- CALL-A-PHONE**
Talk-A-Phone Co.
- CALLMASTER**
Lyman Electronic Corp.
- CALOMIC**
Telegraph Construction & Maintenance Co., Ltd.
- CALTRON**
Caltron Co.
- CAMBIRCROID**
American Electric Cable Co.
- CAMCO**
Camburn, Inc.
- CAMTROL**
Lear, Inc.
- CANADIAN**
Measurement Engineering, Ltd.
- CANDOHMS**
Muter Co.
- CANNON-BALL**
Cannon Co., C. F.
- CAPACILOG**
Wheelco Instruments Div., Barber-Colman Co.
- CAPACITROL**
Wheelco Instruments Div., Barber-Colman Co.
- CAPEHART**
Capehart-Farnsworth Corp.
- CAPITRON**
Aircraft-Marine Products, Inc.
- CAPOHMIST**
Special Products Co.
- CAPR**
Camburn, Inc.
- CAPRISTOR**
Jeffers Electronics Div.,
Speer Carbon Co.
- CARBIC**
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
- CARBOFILM**
Wilkor Div., Aerovox Corp.
- CARB-OHM**
Phaostron Co.
- CARBOLITE**
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
- CARBOMITE**
Continental Carbon, Inc.
- CARBON-COAT**
Electra Mfg. Co., Resistor Div.
- CARBONYL**
General Dystuff Corp.
- CARDAX**
Electro-Voice, Inc.
- CARDIETTE**
Sanborn Co.
- CARDIOFAX**
Electrofax Corp.
- CARDIOSCRIBE**
General Electric X-Ray Corp.
- CARDIOTRON**
Electro-Physical Laboratories, Inc.
- CARDYNE**
Electro-Voice, Inc.
- CARILLON DYNAMIC**
Miller Mfg. Co., M. A.
- CARL MEYER**
Burke & James, Inc.
- CARLITE**
Armco Steel Corp.
- CARLITE**
Bogue Railway Equipment Div.,
Bogue Electric Mfg. Co.
- CARLTON**
Hudson Lamp Co.
- CARRON**
United Pressed Products Co.
- CARRON-AIRE**
Carron Mfg. Co.
- CARTRIJ-DRY**
Pyramid Electric Co.
- CASCADE**
Audio Industries.
- CASCADE**
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
- CASCAMATIC**
Alliance Mfg. Co.
- CASCAMITE**
The Borden Co.,
Chemical Division.
- CASCO**
The Borden Co.,
Chemical Division.
- CASCODE**
J F D Mfg. Co., Inc.
- CASCODE AUTOBOOSTER**
Industrial Television, Inc.
- CASCOPHEN**
The Borden Co.,
Chemical Division.
- CASCOREZ**
The Borden Co.,
Chemical Division.
- CASTOMATIC**
Federated Metals Div.,
American Smelting & Refining Co.
- CASTORDAG**
Acheson Colloids Co.
- CATABOND**
Catalin Corp. of America
- CATAPAK**
Catalin Corp. of America
- CATAVAR**
Catalin Corp. of America
- CATHODE-RAY STETHOSCOPE**
Feiler Engineering Co.
- CATHODRAM**
Telegraph Condenser Co., Ltd.
- CATHOUISOR**
Cinema-Television, Ltd.
- CAT'S EYE**
Ess Specialty Corp.
- CAVALCADE**
Molded Insulation Co.
Aircraft Control Div.
- CAVITRON**
Short Wave Plastic Forming Co.
- CAVITRON**
Woodwelding, Inc.
- CAVI-TUNER**
Radio Receptor Co.
- CBWT**
Automatic Metal Products Co.
- CCO**
Billey Electric Co.
- C-D SEAL**
Cornell-Dubilier Electric Corp.
- CDO**
Eldico of New York, Inc.
- CDR ROTOR**
Radiart Corp.
- CECOR**
Commercial Equipment Co., Inc.
- CECOTITE**
Cook Electric Co.
- CEE-COR**
Permeflux Corp.
- CELAB**
Clark Electronic Labs.
- CELASCREEN**
Celanese Corp. of America
- CELCON**
Celanese Corp. of America
- CELESTRAY**
Weston Electrical Instruments Corp.
- CELLO-BOND**
Paisley Products, Inc.
- CELLUFOAM**
Masonite Corp.
- CELLULOID**
Celanese Corp. of America
- CELORON**
Continental-Diamond Fibre Co.
- CENCO**
Central Scientific Co.
- CENTRATHENE**
Centralab Div. of Globe-Union, Inc.
- CENTRE-KOOLED**
Sarkes Tarzlan Inc.
- CEN-TRI-CORE**
Alpha Metals, Inc.
- CENTRICORES**
Magnetic Metals Co.
- CENTURY**
Electro-Voice, Inc.
- CENTURY TELECEIVERS**
Industrial Television, Inc.
- CERAMAG**
Stackpole Carbon Co.
- CERAMELEX**
Erie Resistor Corp.
- CERAMICAPS**
Muter Co.
- CERAMICON**
Erie Resistor Corp.
- CERA-MITE**
Sprague Electric Co.
- CEREX**
Monsanto Chemical Co.
Plastics Div.
- CERISSO**
Isolantite Mfg. Corp.
- CEROC**
Sprague Electric Co.
- CERON**
Sprague Electric Co.
- CERTI-CRIMP**
Aircraft-Marine Products, Inc.
- CETRON**
Continental Electric Co.
- CHALLENGER**
Bogen Co., Inc., David
- CHALLENGER**
Rek-O-Kut Co., Inc.
- CHAMPION**
Crucible Steel Co. of America
- CHAMPION No. 180**
Division Lead Co.
- CHANALYST**
Radio Corporation of America
- CHAN-L-MOUNT**
Lord Mfg. Co.
- CHANNEL AUTOBOOSTER**
Industrial Television, Inc.
- CHARGALYZER**
McColpin-Christie Corp.
- CHARGICATOR**
Hickok Electrical Instrument Co.
- CHARG-O-MATIC**
Hertner Electric Co.
- CHASS-EZ**
General Cement Mfg. Co.
- CHEMACO**
Koppers Co.
- CHEMALLOW**
Sightmaster of California Co.
- CHEMELEC**
U. S. Gasket Co.
- CHEMIGUM**
Goodyear Tire & Rubber Co.
- CHEMISEAL**
U. S. Gasket Co.
- CHEMLON**
Crane Packing Co.
- CHEMXORK**
Electro Chemical Engineering Co.
- CHEROKEE**
Sangamo Electric Co.
- CHIEFTAIN**
Sangamo Electric Co.
- CHIME-MATIC**
Executone, Inc.
- CHIPPEWA**
Sangamo Electric Co.
- CHITRAN**
Chicago Transformer Div.,
Essex Wire Corp.
- CHLORINOL**
Sprague Electric Co.
- CHROMALIZER**
Maico Co., Inc.
- CHROMARFLASH**
Triumph Mfg. Co.
- CHROMAX**
Driver-Harris Co.
- CHROMEL**
Hoskins Mfg. Co.
- CHROMEL P**
Hoskins Mfg. Co.
- CHROMO-FLASH**
Photographic Products, Inc.
- CHRONO-SPRAY**
Paragon Electric Co.
- CHRONOTHERM**
Minneapolis-Honeywell Regulator Co.
- CHRONOTRON**
Eclipse Pioneer Div.
Bendix Aviation Corp.
- CIBANITE**
Ciba Company, Inc.
- CICRO MICROPOSITIONER**
Barber-Colman Co.
- CIMET**
Driver-Harris Co.
- CINCH**
National Lead Co.
- CINEMAPHONE**
SOS Cinema Supply Corp.
- CINE-VOICE**
Berndt-Bach Inc.
- CINTEL**
Cinema-Television, Ltd.
- CIRCLATRON**
Gadoets, Inc.
- CIRCLE B**
Bristol Motor Div.,
Vocaline Company of America
- CIRCLE ESS**
Stewart Mfg. Corp., F. W.
- CIRCLET**
Trumbull Dept. of General Electric Co.
- CIRCUITMASTER**
Fordham Mfg. Co.
- CIRCUTROL**
Kollsman Instrument Corp.
- CK**
Raytheon Mfg. Co.
- "CL"**
Alpha Wire Corp.
- CLAM PIPE**
Mueller Electric Co.
- CLARKSTAN**
Pacific Transducer Corp.
- CLASSIC**
Jensen Industries, Inc.
- CLASSMETER**
Nuclear Instrument & Chemical Corp.
- CLEAR-PIX**
Grayburne Corp.
- CLEARSITE**
Economy Fuse & Mfg. Co.
- CLEARSONIC**
U. S. Television Mfg. Corp.
- CLETRON**
Cleveland Electronics, Inc.
- CLEVELITE**
Cleveland Container Co.
- CLIMATITE**
Triad Transformer Mfg. Co.
- CLIP ON**
Ferranti Electric, Inc.
- CLORINOL**
Sprague Electric Co.
- CLOSTEMP**
Westinghouse Electric Corp.
- CLOVER-V-BEAMS**
Telrex, Inc.
- CMH**
Flexonics Corp.
- COATINGAGE**
Branson Instruments, Inc.
- CO-3**
Cast Optics Corp.
- CO-AX**
Transradio Ltd.
- COAXITUBE**
Precision Tube Co., Inc.
- COAXWITCH**
Bird Electronic Corp.
- COBANIC**
Driver Co., Wilbur B.
- CODUR**
Maas & Waldstein Co.
- COHARDITE**
Connecticut Hard Rubber Co.
- COHRLASTIC**
Connecticut Hard Rubber Co.
- COILITE**
National Vulcanized Fibre Co.
- COINRAD**
Northeastern Engineering, Inc.
- COLONIAL**
Pyramid Products Co.
- COLONIAL**
Sylvania Electric Products, Inc.
- COLORBRITE**
Eberhard Faber Pencil Co.
- COLOREDE**
Instrument Development Laboratories, Inc.
- COLOR-EYE**
Instrument Development Laboratories, Inc.
- COLORMASTER**
Manufacturers Engineering & Equipment Co.
- COLORTONE**
International Television Corp.
- COLORTOP**
Trico Fuse Mfg. Co.
- COMANCHE**
Sangamo Electric Co.
- COMCO**
Communications Co., Inc.
- COMET**
Driver-Harris Co.
- COMMANDAIR**
JFD Mfg. Co., Inc.
- COMMULAC**
Martindale Electric Co.
- COMMUNICATOR**
West Coast Electronics Co.
- COMMUNO-PHONE**
Bogen Co., Inc., David
- COMMUTATOR RESURFACERS**
Ideal Industries, Inc.
- COMPACTUATOR**
Air Associates, Inc.
- COMPAR**
Goodyear Tire & Rubber Co.
- COMPARITOL**
Scherr Co., Inc., George
- COMPA-STATION**
Motorola Inc.
- COMPENTROL**
Centralab Div. of Globe-Union, Inc.
- COMPO**
Muter Co.
- COMPOUND DIFFRACTION PROJECTOR**
Electro-Voice, Inc.
- COMPREGNITE**
Borden Co., The, Chemical Div.
- COMP-U-TRIM**
Eastern Precision Resistor Corp.
- COMTONE**
Communications Co., Inc.
- CONCERT**
Jensen Mfg. Co.
- CONCERT GRAND**
Stewart-Warner Corp.
- CONCERT HALL**
Louis Bros.
- CONCERTONE**
Berlant Associates
- CONDENS-O-WELD**
Westinghouse Electric Corp.
- CONDUCTALUTE**
Sauereisen Cements Co.
- CON-FEE-PHONE**
Simpson Mfg. Co., Inc., Mark
- CONFESSIONAIRE, THE**
Audio Equipment Co., Inc.
- CONFLEX**
Metals & Controls Corp.,
General Plate Div.
- CONICAL-V-BEAM**
Telrex Inc.
- CONNECTRONICS**
Continental Connector Corp.
- CONNONATA**
Conn Ltd., C. G.
- CONNONETTE**
Conn Ltd., C. G.
- CONPERNIK**
Westinghouse Electric Corp.
- CON-TAC-TOR**
Minneapolis-Honeywell Regulator Co.
- CONTRIFLEX**
Eagle Signal Corp.
- CONTROLITE**
Ward Leonard Electric Co.

- CONVECTRON**
Eclipse Pioneer Div.
Bendix Aviation Corp.
- CONVERS-O-CALL**
National Inter-Communication Systems, Inc.
- COOKE**
R. Y. Ferner Co.
- COOLER-PROOF**
Paisley Products Inc.
- COPOLENE**
American Phenolic Corp.
- COPRENE**
Mass & Waldstein Co.
- COPROX**
Bradley Labs., Inc.
- COPYFLEX**
Bruning Co., Inc., Charles
- CORAL DESIGNS**
Dietz Co., Henry G.
- COREPROOF**
Magnetic Metals Co.
- CORKOUSTIC**
Armstrong Cork Co.
- CORNELL**
Video Corp. of America
- CORO-GARD**
Minnesota Mining & Mfg. Co.
- COROHON**
Wilkor Div., Aerovox Corp.
- CORONASEAL**
Square Root Mfg. Corp.
- CORONATEST**
Network Mfg. Corp.
- CORONET**
Camburn, Inc.
- CORONOX**
Westinghouse Electric Corp.
- COROX**
Westinghouse Electric Corp.
- CORIB**
Ohmite Mfg. Co.
- CORSAIR**
JFD Mfg. Co., Inc.
- CORULITE**
Premax Products Div.
Chisholm-Ryder Co., Inc.
- CORWICO**
Cornish Wire Co.
- COSMALITE**
Cleveland Container Co., The
- CO-SPIRAL**
Stephens Mfg. Corp.
- COSSOR**
Beam Instruments Corp.
- COTO**
Coto-Coil Co., Inc.
- COTTONITE**
Acme Wire Co.
- COUNTOMATIC**
Instrument Development Labs.
- COUPLATE**
Centralab Div.
Globe Union Inc.
- COX**
Commercial Research Labs., Inc.
- CO-X**
Boston Insulated Wire & Cable Co.
- COXPROX**
Bradley Labs.
- CP-2**
Cast Optics Corp.
- CPC**
Columbus Products Corp.
- CR-39**
Cast Optics Corp.
- CRL**
Centralab Div. of Globe-Union, Inc.
- CRABLOCK**
Burndy Engineering Co. Inc.
- CRAFTSMEN**
Radio Craftsmen, Inc.
- CRAFT LABORATORIES**
Electro Craft, Inc.
- CRANEPHONE**
Farmers Engineering & Mfg. Co.
- CRAPO**
Indiana Steel & Wire Co.
- CREME-O-WAX**
General Cement Mfg. Co.
- CRESTRAN**
Crest Transformer Corp.
- CRESTROL**
Crest Transformer Corp.
- CRISE**
Acro Mfg. Co.
- CRITON**
Southern Industries of Maryland Inc.
- CROLITE**
Crowley & Co., Inc., Henry L.
- CROLOY**
Crowley & Co., Inc., Henry L.
- CROMAG**
Crowley & Co., Inc., Henry L.
- CROMALOY**
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
- CROTHANE**
Crowley & Co., Inc., Henry L.
- CRUCIBLE WELD**
Westinghouse Electric Corp.
- CRYSOON**
Crystal Research Labs., Inc.
- CRYSTALAB**
Crystal Research Labs., Inc.
- CRYSTALEAR**
Brush Electronics Co.
- CRYSTALIGNED**
Magnetic Metals Co.
- CRYSTALINER**
Monitor Products Co.
- CRYSTAL-SEAL**
Gits Molding Corp.
- CRYSTAL-VOX**
Laurehk Radio Mfg. Co.
- CRYSTOGRAPH**
Offner Electronics, Inc.
- CRYSTOLON**
Norton Co.
- C S P**
Westinghouse Electric Corp.
- CTS**
Chicago Telephone Supply Corp.
- CUB CORDER**
Ectro, Inc.
- CUNICO**
Arnold Engineering Co.
- CUNIFE**
Arnold Engineering Co.
- CUNNINGHAM**
Radio Corp. of America
- CUPALOY**
Westinghouse Electric Corp.
- CUPRON**
Driver Co., Wilbur B.
- CUPROVAC-E**
Vacuum Metals Corp.
- CURTAIN OF LIGHT**
Electronic Control Corp.
- CUSHIONED-POWER**
Robotron Corp.
- CUSHIONTONE**
Armstrong Cork Co.
- CUSTOMODE**
Jensen Mfg. Co.
- CYCLE-PROGRESS**
Automatic Temperature Control Co.
- CYCLELOG**
Foxboro Co., The
- CYCL-FLEX**
Eagle Signal Corp.
- CYCLO-FLEX**
Wilson & Co., G. C.
- CYCLOHM**
Howard Industries, Inc.
- CYCLO-MONITOR**
Counter & Control Corp.
- CYCLO-RAY**
Friez Instrument Div.
Bendix Aviation Corp.
- CYCLO-TROL**
Cyclotron Specialties Co.
- CYCLOTROL**
Minneapolis-Honeywell Regulator Co.
- D 54**
Mallory & Co., Inc., P. R.
- "D" NICKEL**
International Nickel Co., Inc.
- DAG**
Acheson Colloids Co.
- DAKA-WARE**
Davies Molding Co., Harry
- DALBAR**
Electronic Enterprises
- DALE**
Electronic Development Co.
- DALMOTRON**
Dalmo Victor Co.
- DALOHM**
Dale Products, Inc.
- DAMASCENE**
Linick Chemical Co.
- DANCO**
Daniels, Inc., C. R.
- DANDEE**
Aerovox Corp.
- DANDUX**
Daniels, Inc., C. R.
- DA-NITE**
Bendix Aviation Corp.
- DASON**
Davis & Co., J. W.
- DATAR**
Viewlex, Inc.
- DAVENOIL**
Daven Co.
- DAVEY**
Vibroscope Co.
- DAVOHM**
Daven Co.
- DC SILICONES**
Dow Corning Corp.
- DE ARMOND**
Rowe Industries
- DE FOREST**
Radio Corp. of America
- DECA SWEEP**
Decade Instrument Co.
- DECAFIER**
Decade Instrument Co.
- DECALATOR**
Decade Instrument Co.
- DECASOL**
Decimeter, Inc.
- DECAVIDER**
Decade Instrument Co.
- DECO**
Dumont Electric Co.
- DEEMINITE**
Crystal Research Labs., Inc.
- DEEMINIZER**
Crystal Research Labs., Inc.
- DEEMON-HEAT**
Wall Mfg. Co.
- DE-FROST-IT**
Paragon Electric Co.
- DEHYDRA**
Wappler, Inc.
- DE-ION**
Westinghouse Electric Corp.
- DEKAPOT**
Brown Electro-Measurement Corp.
- DEKASTAT**
Brown Electro-Measurement Corp.
- DEKA-XTAL**
Scientific Radio Products Co.
- DELCO**
General Motors Corp.
- DELPEC**
Centralab Div. of Globe-Union, Inc.
- DELTABESTON**
General Electric Co.
- DELTAMAX**
Allegheny Ludlum Steel Corp.
- DELTAMAX**
Arnold Engineering Co.
- DEMCO**
Dormitzer Electric Co., Inc.
- DENSICHRON**
Welch Scientific Co., W. M.
- DENSITE**
West Virginia Pulp & Paper Co.
- DEOXIDINE**
American Chemical Paint Co.
- DEOXO**
Baker & Co., Inc.
- DEPOLARAY**
Electronic Medical Foundation
- DEPOLARAY JR.**
Electronic Medical Foundation
- DEPOLATHERM**
Electronic Medical Foundation
- DEPOLATRON**
Electronic Medical Foundation
- DEPTHOMETER**
Bludworth Marine Div.
National-Simplex-Bludworth, Inc.
- DESCO**
Dietz Design & Mfg. Co.
- DETECT-A-FIRE**
Fenwal, Inc.
- DETECTOMETER**
Dillon & Co., Inc., W. C.
- DETECTRODE**
Detectolab, Inc.
- DETERMOHM**
Ohmite Mfg. Co.
- DEW POINTER**
Illinois Testing Labs., Inc.
- DIABO**
Tibbetts Industries, Inc.
- DIACLOR**
Sangamo Electric Co.
- DIACONE**
Altac Lansing Corp.
- DI-ACRO**
O'Neil Irwin Mfg. Co.
- DIAGNOMETER**
Supreme, Inc.
- DIAL**
Nebel Lab., R. E.
- DIALCO**
Dialight Corporation
- DIAMATROL**
Standard Electronics Research Corp.
- DIAMOND**
Continental-Diamond Fibre Co.
- DIAMOND**
Tetrad Corp.
- DIAMOND G**
Garrett Co., Inc., G. K.
- DIAMOND-H**
Hart Mfg. Co.
- DIAMOND PRODUCTS**
Garrett Co., Inc., George K.
- DIAMOND WEAVE**
Sickles Div., F. W., General Instrument Corp.
- DIAMONTINE**
Linick Chemical Co.
- DIAPHLEX**
Cook Electric Co.
- DIATRON**
Consolidated Engineering Corp.
- DICHRIC**
Liberty Mirror Div.,
Libbey-Owens Ford Glass Co.
- DICO**
Diamond Mfg. Co.
- DICTABELT**
Dictaphone Corp.
- DICTACORD**
Dictaphone Corp.
- DIEFLEX**
Insulation Manufacturers Corp.
- DIEGRAF**
Grafo Colloids Corp.
- DIELITE**
Wirt Co.
- DI-FAN**
Andrew Co.
- DIFFERENTIAL**
Electro-Voice, Inc.
- DIFFUSICONE**
University Loudspeakers, Inc.
- DI-FORMED**
Precision Paper Tube Co.
- DILECTO**
Continental Diamond Fibre Co.
- DI-MAX**
Armco Steel Corp.
- DIMMERETTE**
Ward Leonard Electric Co.
- DIOTRON**
Reed Research Inc.
- DIPLOIT**
Dielectric Materials Co.
- DIP PAK**
Fidelity Chemical Products Corp.
- DIPWITE**
Special Chemicals Co.
- DIPWRAP**
Paisley Products Inc.
- DIRECT-DRIVE**
Shure Brothers, Inc.
- DIRECTRON**
Barry Electronics Corp.
- DIRECTRON**
Sanford Miller Co.
- DISCALOY**
Westinghouse Electric Corp.
- DISCAPS**
Radio Materials Corp.
- DISCOHM**
Ward Leonard Electric Co.
- DISKCHANGERS**
Webster-Chicago Corp.
- DISPATCHER**
Motorola Inc.
- DISPLAY KING**
Gale Dorothea Mechanisms
- DIVCO**
Division Lead Co.
- DIVCO HOT-ROZ**
Division Lead Co.
- DIVCO INTENSE-REZ**
Division Lead Co.
- DIVERSE-ADAPTOR**
Decimeter, Inc.
- DIVIDOHM**
Ohmite Mfg. Co.
- DOBRO**
Valco Mfg. Co.
- DOG**
Radio Corporation of America
- DOMEPAK**
Sprague Electric Co.
- DONUT**
Associated Research Inc.
- DOSIFILM**
R-C Scientific Instrument Co., Inc.
- DOSIMETER**
Instrument Development Labs.
- DOT**
United-Carr Fastener Corp.
- DOUGLAS**
British Industries Corp.
- DOWMETAL**
Dow Chemical Co.
- DPR**
Hardman Co., Inc., H. V.
- DREADNAUGHT**
Wall Mfg. Co.
- DRIMETER**
Fielden Electronics Inc.
- DRI-N-TITE**
Horn Co., Inc., A. C.
- DRIOX**
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
- DRITHERM**
North American Electric Lamp Co.
- DRUM-KARRIER**
Falstrom Co.
- DU NOUY**
Central Scientific Co.
- DUAL DANDEE**
Aerovox Corp.
- DUAL-DRUM**
Gorrell & Gorrell
- DUAL-HORN**
Brociner Electronics Laboratory
- DUAL-LOCK**
Simmons Fastener Corp.
- DUART**
Mass & Waldstein Co.
- DUBL-VEE**
Workshop Associates,
Div. of The Gabriel Co.
- DUBL-X**
Telrex, Inc.
- DUCCO**
du Pont de Nemours & Co., Inc., E. I.
- DULAC**
Maas & Waldstein Co.
- DULUX**
du Pont de Nemours & Co., Inc., E. I.
- DUO**
J F D Mfg. Co., Inc.
- DUOCARB**
Driver Co., Wilbur B.
- DUO-CHROME**
Duotone Co., Inc.
- DUOCREX**
Horn Co., Inc., A. C.
- DUODE**
Beam Instruments Corp.
- DUODIAL**
Helipot Corp.
- DUODISC**
Duotone Co., Inc.

DUO-FLEX
 Dumore Co., The
DUOLITE
 Pittsburgh Plate Glass Co.
DUOLUX
 Masonite Corp.
DUO-PULSATOR
 Fischer & Co., R. A.
DUO-PULSE
 Automatic Temperature Control Co., Inc.
DUOSCALE
 Tracerlab, Inc.
DUO-SEAL
 Welch Scientific Co., W. M.
DUOSONIC
 Sonic Industries, Inc.
DUO-SPEED
 Pentron Corp.
DUO-SPEED
 V-M Corp.
DUOTAPE
 Duotone Co., Inc.
DUPLATE
 Pittsburgh Plate Glass Co.
DUPLEX
 Altec Lansing Corp.
DUPY
 Inet, Inc.
DURABLE
 Seagar Carbon Co.
DURALINE
 Universal Drafting Machine Corp.
DURALON
 U. S. Stoneware Co.
DURAMEG
 Sprague Electric Co.
DURANICKEL
 International Nickel Co., Inc.
DURANITE
 Aerovox Corp.
DURASHIELD
 Plastic Fabricators Co.
DURATAPE
 Rahm Instruments, Inc.
DUATRON
 Hoffman Corp., C. L.
DURISITE
 U. S. Stoneware Co.
DURITE
 Borden Co., Chemical Div.
DURO
 Rogers Corp.
DUROID
 Rogers Corp.
DURPOINT
 Duotone Co., Inc.
DUTCH BOY
 National Lead Co.
DUXSEAL
 Johns-Manville
D-XER
 JFD Mfg. Co., Inc.
DX MASTERSPEAKERS
 DX Radio Products Co., Inc.
DYEPRINT
 Times Facsimile Corp.
DYKANOL
 Cornell-Dubilier Electric Corp.
DYNACONE
 Lord Mfg. Co.
DYNACORD
 Califone Corp.
DYNAFOCAL
 Lord Mfg. Co.
DYNA-GAGE
 Photocon Research Products
DYNAGRAPH
 Offner Electronics, Inc.
DYNALOG
 Foxboro Co., The
DYNAMASTER
 Bristol Co., The
DYNA-METER
 Industrial Electronics, Inc.
DYNAMIC
 Jackson Electrical Instrument Co.
DYNA-MIKE
 Industrial Electronics, Inc.
DYNAPRENE
 Whitney Blake Co.
DYNATHERM
 American Diathermy Products, Inc.
DYNAURAL
 Scott, Inc., Herman Hosmer
DYNETRIC
 Gisholt Machine Co.
DYNETRIC
 Westinghouse Electric Corp.
DYNOGRAPH
 Annis Co., R. B.
DYNOGRAPH
 Offner Electronics, Inc.
DYNOID
 McQuay-Norris Mfg. Co.

E A D
 Eastern Air Devices, Inc.
EAI
 Electronic Associates, Inc.
E-NICKEL
 The International Nickel Co., Inc.
EF
 Electric Furnace Co.
E G & G
 Edgerton, Germeshausen & Grier, Inc.
E-V
 Electro-Voice, Inc.

EARSET
 Telex, Inc.
EASY-FLO
 Handy & Harman
EASY LISTNER
 Mitchell Industries, Inc.
EBONOL
 Enthone, Inc.
EBROK
 Richardson Co., The
ECCO
 Electrovox Co., Inc.
ECCO
 Triad Transformer Mfg. Co.
ECHOPHONE
 Hallicrafters Co.
ECKCO
 Eckstein Radio & Television Co.
ECO
 Economy Fuse & Mfg. Co.
ECONOMASTER
 Sonotone Corp.
ECON-OHM
 Model Engineering & Mfg. Inc.
ECONO-SLIDE
 Grant Pulley & Hardware Co.
ECONOSTAT
 Barber-Colman Co.
ECONO-SWITCH
 Centralab Div. of
 Globe-Union, Inc.
ECTROTHERM
 Electronic Processes Corp.
EDGEOM
 Ward Leonard Electric Co.
EDIPHONE
 Edison, Inc., Thomas A.
EDIPHONE-TELEDIPHONE
 Edison Inc., Thomas A.
EEL
 Electronic Enterprises Inc.
EGYPTIAN TIP
 Mitchell Industries, Inc.
EI
 Electrical Industries, Inc.
EICO
 Electronic Instrument Co., Inc.
EIGHT-BALL
 Ward Products Corp.,
 Div. of The Gabriel Co.
EILEX
 Electro Engineering Works
EIMAC
 Eitel-McCullough, Inc.
EKOTAPE
 Webster Electric Co.
EL
 Electrons, Inc.
ELASTOBOND
 Paisley Products, Inc.
ELASTRON
 Industrial Synthetics Corp.
ELC
 Armco Steel Corp.
ELCOFONE
 Lorai Electronics Corp.
ELDEC
 Electro Development Corp.
ELECOM
 Electronic Computer Div.,
 Underwood Corp.
ELECOTONE
 Northeastern Engineering, Inc.
ELECTRACER
 Special Products Co.
ELECTREX
 Gorrell & Gorrell
ELECTRICORD
 Pacific Electriccord Company
ELECTRITE
 West Virginia Pulp & Paper Co.
ELECTRIX
 U. S. Rubber Co.
ELECTRO BOND
 Short Wave Plastic Forming Co.
ELECTRO-BOND
 Woodwelding, Inc.
ELECTRO-CAL
 Industrial Electronics, Inc.
ELECTROCAM
 Westinghouse Electric Corp.
ELECTRO-CHEMICAL
 Electrovox Co., Inc.
ELECTRO-FLOW
 Super Flow Solder Co., Inc.
ELECTRO-GLOW
 Industrial Devices, Inc.
ELECTRO GRAPHIC
 Precise Measurements Co.
ELECTRO-LARYNX
 Aurex Corp.
ELECTROLIMIT
 Pratt Whitney Div.,
 Niles-Bement-Pond Co.
ELECTROMANOMETER
 Sanborn Co.
ELECTRO-MATIC
 Automatic Signal Div.,
 Eastern Industries Inc.
ELECTROMAX
 Leeds & Northrup Co.
ELECTROWET
 Electro Metallurgical Co., A Div. of
 Union Carbide & Carbon Corp.
ELECTRONAMIC
 Precision Apparatus Co. Inc.

ELECTRONIC DESIGNS
 Yonkers Industries
ELECTRONIC EAR
 Sonotone Corp.
ELECTRONIC ESSENTIALS
 Aerolite Electronics Corp.
ELECTRONIC FEATHER
 Westinghouse Electric Corp.
ELECTRONIC MEMORY
 Webster-Chicago Corp.
ELECTRONIC STETHOSCOPE
 Feiler Engineering Co.
ELECTRONIK
 Minneapolis-Honeywell Regulator Co.
ELECTROPAD
 Electronic Medical Foundation
ELECTRO-PROBE
 Erwood, Inc.
ELECTROPHOTOMETER
 Fisher Scientific Co.
ELECTROQUIPT
 Filters, Inc.
ELECTROSCOPE
 Feiler Engineering Co.
ELECTROSE
 Insulation Mfg. Co.
ELECTROSHIELD
 American Cladmetals Co.
ELECTROSURG
 Coles Corp.
ELECTROTESTER
 Feiler Engineering Co.
ELECTROTEMP
 Westinghouse Electric Corp.
ELECTRO-WIPE
 Duotone Co., Inc.
ELECTROWRITER
 Pioneer Electric & Research Corp.
ELECTROX
 Schauer Mfg. Corp.
ELECTR-O-VANE
 Minneapolis-Honeywell Regulator Co.
ELETRONITE
 Republic Steel Corp.
ELECTROTUNER
 General Instrument Corp.
ELEKTRAN
 Ward Products Div. of
 The Gabriel Co.
ELEPHANT
 Phosphor Bronze Corp.
ELFURNO
 Electric Furnace Co.
ELINCO
 Electric Indicator Co.
ELKALOY
 P. R. Mallory & Co., Inc.
ELKONITE
 P. R. Mallory & Co., Inc.
ELKONIUM
 P. R. Mallory & Co., Inc.
ELMAC
 Multi-Products Co.
EL MENCO
 Electro Motive Mfg. Co.
ELMET
 North American Philips Co., Inc.
ELVANOL
 du Pont de Nemours & Co., Inc., E. I.
E-M
 Electric Machinery Mfg. Co.
EMC
 Electronic Measurements Corp.
EMC
 Howard Industries, Inc.
EMDECO
 Magnetic Devices Corp.
EMPIRE
 Mica Insulator Co.
EMPIRE
 Russell, Burdsall & Ward
 Bolt and Nut Co.
E. N.
 Electro-Nite Carbon Co.
ENAMELITE
 Acme Wire Co.
ENDURO
 Republic Steel Corp.
ENDURPRENE
 General Insulated Wire Works, Inc.
ENDOGAS
 Westinghouse Electric Corp.
ENERGIZED
 Alpha Metals, Inc.
ENE-VOLT
 Gorrell & Gorrell
ENGRAVOGRAPH
 New Hermes, Inc.
ENPO
 Piqua Machine & Mfg. Co.
ENVOY
 Ansley Mfg. Co., Arthur
EONITE
 U. S. Rubber Co.
EOPRENE
 U. S. Rubber Co.
E. P.
 Electronic Products Co.
EPCO
 Etched Products Corp.
EPM
 Electronic Parts Mfg. Co.
EPIC
 Electrical & Physical Instrument Corp.
EPIPHEN
 Borden Co., The, Chemical Div.
EPLAB
 Eppley Lab., Inc., The

EPON
 Shell Chemical Corp.
EPUT
 Berkeley Scientific Corp.
EQUALOAD
 Keystone Carbon Co., Inc.
ERSIN MULTICORE
 Multicore Solders Ltd.
ESCO
 Electric Specialty Co.
ESCO
 Electro Switch Corp.
ESICO
 Electric Soldering Iron Co.
ESNA
 Elastic Stop Nut Corp.
ESNAILS
 Elastic Stop Nut Corp.
ESSAR
 Unltronic, Inc.
ESTAR
 Sprague Electric Co.
ETCO
 Electronic Transformer Co., Inc.
ETHOCEL
 Dow Chemical Co.
ETHYLON
 American Phenolic Corp.
EUREKA
 Morse Co., Frank W.
EUTEC-SILVER-WELD
 Eutectic Welding Alloys Corp.
EUTECHROM
 Eutectic Welding Alloys Corp.
EUTECROD
 Eutectic Welding Alloys Corp.
EUTECTOR
 Eutectic Welding Alloys Corp.
EUTECTRODE
 Eutectic Welding Alloys Corp.
EVABRITE
 Bache & Co., Semon
EVALAST
 Bache & Co., Semon
EVANOHM
 Driver Co., Wilbur B.
EVELYN
 Rubicon Co.
EVEN-BREAK
 Electric Eye Equipment Co.
EVENRAY
 Fostoria Pressed Steel Corp.
EVEREADY
 National Carbon Co., Div. of
 Union Carbide & Carbon Corp.
EVERLASTING
 Harper Co., The, H. M.
EVERLOCK
 Thompson-Bremer Co.
EVER-LOK
 Russell & Stoll Co., Inc.
EXACT PHOTOCOPIY
 General Photo Products Co.
EXCELLALL
 Frederick Post Co.
EXIDE
 Electric Storage Battery Co.
EXIDE-IRONCLAD
 Electric Storage Battery Co.
EXIDE-MANCHEX
 Electric Storage Battery Co.
EXPRESS
 Centralab Div. of Globe-Union, Inc.
EYE WITNESS
 Radio Corporation of America
E-Z
 Ideal Industries, Inc.
E-Z
 Pyramid Products Co.
E-Z-CODE
 Westline Products Div. of
 Western Lithograph Co.
E-Z CUE
 Amplifier Corp. of America
E-ZEE-ON
 Indiana Steel Products Co.
EZSOL
 Hudson Wire Co.

F-C-I
 Film Capacitors, Inc.
FAIRYLITE
 Shoe Form Co., Inc.
FARADON
 Cornell-Dubilier Electric Corp.
FARATRON
 Lumenite Electric Co.
FARCO
 Farrelloy Co.
FASALOY
 Fansteel Metallurgical Corp.
FASTACK
 Paisley Products, Inc.
FASTELL
 Fansteel Metallurgical Corp.
FASTATCH
 Centralab Div. of Globe-Union, Inc.
FASTENEERING
 Central Screw Co.
FASTICK
 Paisley Products, Inc.
FASTOP
 Lear, Inc.
FAST'S
 Koppers Co., Inc.

ATHOMETER
Raytheon Mfg. Co.

FAX-FILM
Brush Electronics Co.

FAXIMILE
Hogan Laboratories, Inc.

FAXPAPER
Hogan Laboratories, Inc.

FEATHERIDE
Webster Electric Co.

FEATHERLITE
Brush Electronics Co.

FEDCO
Federal Engineering Co.

FEDERAL RECORDER
Conn Ltd., C. G.

FEL-PAK
Felt Products Mfg. Co.

FEL-PRO
Felt Products Mfg. Co.

FEMCO
Farmers Engineering & Mfg. Co.

FENOX
Bakelite Corp.

FERRAMIC
General Ceramics & Steatite Corp.

FERROVAC-E
Vacuum Metals Corp.

FIBERGLAS
Owen-Corning Fiberglas Corp.

FIBESTOS
Monsanto Chemical Co.

FIBRACOUSTIC
Johns-Manville Sales Corp.

FIBRETOINE
Johns-Manville Sales Corp.

FIDELIFLARE
Audiocraft, Inc.

FIDELITONE
Permo, Inc.

FIFTY-FOUR
Cardwell Mfg. Corp., Allen D.

FILMGRAPH
Miles Reproducer Co., Inc.

FILMITE
Sprague Electric Co.

FILPLATE
Centralab Div. of Globe-Union, Inc.

FILMSCRIBER
Miles Reproducer Co., Inc.

FILMIC
Driver-Harris Co.

FILPEC
Centralab Div., Globe Union Inc.

FILTACOL
Magnetic Core Corp.

FILT-A-COR
Magnetic Core Corp.

FILTERETTE
Tobe Deuttschmann Corp.

FILTERNOYS
Continental Carbon, Inc.

FILTEROL
Sprague Electric Co.

FILTER POINT
Dutone Co., Inc.

FILTERS L
Sprague Electric Co.

FILTERVOLT
Insuline Corp. of America

FIL-TRAN
Vidaire Electronics Mfg. Co.

FINCO
Finney Co.

FINNFLEX
Finn & Co., Inc., T. R.

FIRE DEVIL
Littelfuse, Inc.

FIREYE
Combustion Control Corp.

FIREWALL
Rockbestos Products Corp.

FIREZONE
Rockbestos Products Corp.

FISHBONE
Telrex Inc.

FISCHERQUARTZ
Fischer & Co., R. A.

FISCHERSINE
Fischer & Co., R. A.

FISCHERTHERM
Fischer & Co., R. A.

FISCO
Forman Insulating Screw Corp.

FISHERPHONE
Fisher Research Lab.

5-WAY
Superior Electric Co., The

FIXTOHM
Campbell Industries, Inc.

FLAG GRIP
Aircraft-Marine Products, Inc.

FLAME-OTROL
Wheelco Instrument Div., Barber-Colman Co.

FLAME-WARDEN
Combustion Research Laboratories, Inc.

FLASH
Sheldon Electric Co.
Div. of Allied Electric Products, Inc.

FLATAK
Paisley Products Inc.

FLATOHM
Centralab Div. of Globe-Union, Inc.

FLATWRAP
Paisley Products Inc.

FLEET CONTROL
Hammarlund Mfg. Co.

FLEETWOOD
Conrac, Inc.

FLEXAGUIDE
Airttron Inc.

FLEX-A-POWER
Trumbull Dept. of General Electric Co.

FLEXARC
Westinghouse Electric Corp.

FLEXIFLAT
Paisley Products Inc.

FLEXIFONE
Dukane Corp.

FLEXIFORM
Precision Paper Tube Co.

FLEXILUGS
Frankel Connector Co.

FLEXISPLICES
Frankel Connector Co.

FLEXITE
Markel & Sons, L. Frank

FLEXITIP
Weller Mfg. Co.

FLEXI-TROL
Wilson & Co., G. C.

FLEXITUBE
Schott Co., Walter L.

FLEXLOC
Standard Pressed Steel Co.

FLEXO-FLUTE
Arro Expansion Bolt Co.

FLEXOHM
Clarostat Mfg. Co., Inc.

FLEXON
Flexonics Corp.

FLEXOPULSE
Eagle Signal Corp.

FLEXO WAX C
Glyco Products Co., Inc.

FLEX-SOK
Stupakoff Ceramic & Mfg. Co.

FLEX-STAFF
Pfanstiehl Chemical Co.

FLEXTACK
Paisley Products Co.

FLIGHT COM
Communications Co., Inc.

FLIGHTWEIGHT
Bendix Aviation Corp.

FLIMOSEAL
Telegraph Condenser Co., Ltd.

FLIPON
Westinghouse Electric Corp.

FLOOD-FLASH
Photobell Company

FLOSOL
American Chemical Paint Co.

FLOWMETER
Hastings Instrument Co.

FLOWRATOR
Fischer & Porter Co.

FLUORADEX
Westinghouse Electric Corp.

FLUORETOR
Menlo Research Laboratory

FLUOROFLEX-C
Resistoflex Corp.

FLUOROFLEX-T
Resistoflex Corp.

FLUORO-RECORD
Fairchild Camera & Instrument Corp.

FLUOROSPOT
Westinghouse Electric Corp.

FLUOROVUE
Westinghouse Electric Corp.

FLUROPACK
Telegraph Condenser Co., Ltd.

FLUSH-LITE
Littelfuse, Inc.

FLUSHLITE
Drake Mfg. Co.

FLUTED ELECTRODE
P. R. Mallory & Co., Inc.

FLUX GATE
Eclipse-Pioneer Div., Bendix Aviation Corp.

FLUXOL
Standard Metals Corp.

FLUXRITE
National Lead Co.

FLYING ARROW
Ward Products Corp. Div. of The Gabriel Co.

FME
Federal Mfg. & Engineering Corp.

FM-G
General Controls Co.

F. N. A.
Paisley Products, Inc.

FOCALIZER
Quam Nichols Co.

FONOGRAPHS
Webster-Chicago Corp.

FOOTROL
General Control Company

FORASITE
Reichhold Chemicals, Inc.

FORDMICA
Ford Radio & Mica Corp.

FORMEX
General Electric Co.

FORMFLEX
Aircraft Transformer Corp.

FORMVAR
Acme Wire Co.

FORMVAR
Phelps Dodge Copper Products Co.

FORTICEL
Celanese Corp. of America.

FORTISAN
Celanese Corp. of America.

44
Kester Solder Co.

"49" ALLOY
Magnetic Metals Co.

49ER
Forty Niner Corp.

FOSTERITE
Westinghouse Electric Corp.

FOTO-FLO
Haloid Co., The

FOTOELECTRIC
Worner Electronic Devices

F. P. INDUCTUNER
Mallory & Co., Inc., P. R.

FRAHM
Biddle Co., James C.

FREAS
Precision Scientific Co.

FREE-CUT INVAR "36"
Carpenter Steel Co.

FREE-VANE
Bristol Co., The

FREQUEMATIC
Federal Telephone & Radio Corp.

FRETARAY
Fretco Television Co., Inc.

FRETLINE
Fretco Television Co., Inc.

FRIGISTAT
Minneapolis-Honeywell Regulator Co.

FRINGE LEADER
Radio Merchandise Sales, Inc.

FRINGEMASTER
Radio Merchandise Sales, Inc.

FROST
Chicago Telephone Supply Corp.

FURNATRON
Westinghouse Electric Corp.

FUSELITE
Alden Products Co.

FUSETRON
Bussmann Mfg. Co.

FUSIONWELD
Avon Tube Div., Higbie Mfg. Co.

FUSTATS
Bussmann Mfg. Co.

FYBERGLASS
Rush Wire Stripper Div., Eraser Co., Inc., The

FYBEROID
Wilmington Fibre Specialty Co.

G-C
General Cement Mfg. Co.

GA&F CARBONYL
General Dyestuff Corp.

G METER
Boonton Radio Corp.

GALVO PROTECTOR
Audio Instrument Co., Inc.

GAMATEK
Consolidated Engineering Corp.

GAMMATRON
Heintz & Kaufman Div. of The Robert Dollar Co.

GANGPOT
Giannini & Co., Inc., G. M.

GAP/R
Philbrick Researches, Inc., George A.

GARCEAU
Electro-Medical Lab., Inc.

GARDINER
Federated Metals Div., American Smelting & Refining Co.

GARDSMAN
Taco West Corp.

GAROD
Majestic Radio & Television Div of The Wilcox-Gay Corp.

GASK-O-SEAL
Wolfe Co., Inc., Franklin C.

GB
Goldsmith Bros. Smelting & Refining Co.

GEARMOTOR
Motoresearch Co.

GEDA
Goodyear Aircraft Corp.

GEN
Symphony Radio & TV Co.

GENEMOTOR
Carter Motor Co.

GENERAL
Commodore Record Co.

GENERAL BRAND
General Dry Batteries, Inc.

GENERALITIES
Fostoria Pressed Steel Corp.

GENESCOPE
Simpson Electric Co. Div. of American Gage & Machine Co.

GENEVALOC
Bendix Aviation Corp., Pacific Div.

GEN-RAL
Muter Co.

GEOFORMER
Triad Transformer Mfg. Co.

GEOHMETER
Georator Corp.

GEON
Goodrich Chemical Co., B. F.

GEOTRODE
Georator Corp.

GEOVOLT METER
Georator Corp.

GER-HIDE
Gering Products, Inc.

GERON
Gering Products, Inc.

GER-PAK
Gering Products, Inc.

GI
General Industries Co.

GIANT SIX
Battery Division, Burgess Battery Co.

GIBSILOY
Gibson Electric Co.

GLASBES
Electro-Technical Products Div. of Sun Chemical Corp.

GLASOHM
Clarostat Mfg. Co., Inc.

GLASSEAL
Pyramid Electric Co.

GLASS SEALING "42"
Carpenter Steel Co.

GLASSMIKE
Condenser Products Co.

GLASTIC
Laminated Plastics, Inc.

GLASWELD
U. S. Plywood Corp.

GLENNITE
Glenco Corp.

GLENNITE
Gulton Mfg. Corp.

GLIDER
Shure Brothers

GLO-MELT
Wasserlein Mfg. Co., Inc.

GLOBAL
Molded Insulation Co.

GLOBAR
Carborundum Co.

GLOBE TROTTER
Radio Corporation of America

GLO-N-GLO
Canadian Radium & Uranium Corp.

GLOSSTEX
Daniels, Inc., C. R.

GLO-TECH
Fischer & Porter Co.

GLYCOWAX S-932
Glyco Products Co., Inc.

GLYDAG
Acheson Colloids Co.

GLYPTAL
General Electric Co.

G-MAX
Flight Research Engineering Corp.

GOLDEN BEAM
Motorola, Inc.

GOLDEN THROAT
Radio Corporation of America

GOLDEN VIEW
Motorola Inc.

GOLDEN VOICE
Motorola Inc.

GOLD-SEAL
Miller Co., B. F.

GOODELL
Minnesota Electronics Corp.

GOODLINE
Good, Inc., Don

GOOD-RITE
Goodrich Chemical Co., B. F.

GOTHAM
Shevers Inc., Harold

GOTHARD
Johnson Co., E. F.

GP
Erle Resistor Corp.

GRC
Gries Reproducer Corp.

GRACOIL
Gramer Transformer Co.

GRADIENT
Shure Brothers, Inc.

GRAFOIL
Brush Electronics Co.

GRAFOLUX
Grafo Colloids Corp.

GRAFO CONCENTRATE
Grafo Colloids Corp.

GRA-LAB
Dimco-Gray Co.

GRAMTX
U. S. Graphite Co. Div. of The Wickes Corp.

GRANODINE
American Chemical Paint Co.

GRAPHALLOY
Graphite Metallizing Corp.

GRAPHANALOGUE
Gerber Scientific Instrument Co.

GRAPHITAR
U. S. Graphite Co. Div. of The Wickes Corp.

GRATRAN
Gramer Transformer Co.

GRAVIGAGE
Ess Specialty Co.

GREENBILT
Equipment and Service Co.

GREEN GEM
Rauland-Borg Corp.

GREENOHM
 Clarostat Mfg. Co., Inc.
GREIBACH METER
 Columbus Products Corp.
GRENZ
 Westinghouse Electric Corp.
GRIDNIC
 Driver-Harris Co.
GRIP-HOLD
 JFD Mfg. Co.
GRIP-POINT
 Vaco Products Co.
GRIP TIGHT
 Paisley Products, Inc.
GRIPMASTER
 Walker Co., George
GRIPPER
 Scovill Mfg. Co.
GRIPITITE
 Stevens-Walden, Inc.
GRIZZLY
 U. S. Rubber Co.
GROMMES
 Precision Electronics
GTC
 General Transformer Co.
GUDELACE
 Gudebrod Bros. Silk Co., Inc.
GUEST TELEVISION
 Industrial Television, Inc.
GUIDE-A-TUBE
 S-C Laboratories, Inc.
GYRO FLUX GATE
 Eclipse-Pioneer Div.,
 Bendix Aviation Corp.
GYROPILOT
 Sperry Gyroscope Co., Div. of
 The Sperry Corp.
GYROSYN
 Sperry Gyroscope Co., Div. of
 The Sperry Corp.

H. C. R. ALLOY
 Telegraph Construction &
 Maintenance Co., Ltd.
HABIRLENE
 Phelps Dodge Copper Products Corp.
HABIRSHAW
 Phelps Dodge Copper Products Corp.
HALADOL
 Haloid Co., The
HALLOWELL
 Standard Pressed Steel Co.
HALO
 Haloid Co., The
HALOBROME
 Haloid Co., The
HALOWAX
 Union Carbide & Carbon Corp.
HALROSS
 Canadian Aviation Electronics, Ltd.
HAM CRYSTALS
 Nebel Lab., R. E.
HAMMERTONE
 Maas & Waldstein Co.
HAMMETER
 Simpson Electric Co. Div. of
 American Gage & Machine Co.
HAMSWITCH
 Mallory & Co., Inc., P. R.
HANDI-GLOW
 Industrial Devices Inc.
HANDIE TALKIE
 Motorola, Inc.
HANDY-FLUX
 Handy & Harman
HANDYVAR
 Martindale Electric Co.
HARTLEY-TURNER
 Hartley Co., Ltd., H. A.
HARTRON
 Hart & Co., Inc., Frederick
HARVEL
 Irvington Varnish & Insulator Co.
HARVEY
 Harvey Wells Electronics, Inc.
HARVEY
 Peck & Harvey
HASCROME
 Haynes Stellite Co.,
 Division of Union Carbide & Carbon Corp.
HASTELLO
 Haynes Stellite Co.,
 Division of Union Carbide & Carbon Corp.
HAYSTELLITE
 Haynes Stellite Co.,
 Division of Union Carbide & Carbon Corp.
HAZACODE
 Hazard Insulated Wire Works Div.,
 The Okonite Co.
HAZACORD
 Hazard Insulated Wire Works Div.,
 The Okonite Co.
HAZAKROME
 Hazard Insulated Wire Works Div.,
 The Okonite Co.
HAZARDEX
 Hazard Insulated Wire Works Div.,
 The Okonite Co.
HAZEGAGE
 Ess Specialty Corp.
HC
 Nebel Lab., R. E.
HEAD
 Industrial Electronics, Inc.

HEATEX
 Acme Wire Co.
HEATHKIT
 Heath Co.
HECO
 Heinemann Electric Co.
HECTOFAX
 Western Union Telegraph Co.
HEETMOR
 Acme Electric Heating Co.
HELIOFLASH NO. 124
 MacLeod & Hanopol
HELI-O-LITES
 C. F. Pease Co.
HELIOS
 Keuffel & Esser Co.
HELIX
 Biggs Co., Carl H.
HERCOCEL A
 Hercules Powder Co., Inc.
HERCOCEL E
 Hercules Powder Co., Inc.
HERCULES
 Acromark Co.
HERCULES
 Rubicon Co.
HERCULES
 Shure Brothers, Inc.
HERCULITE
 Pittsburgh Plate Glass Co.
HERLEC
 Sprague Electric Co.
HERMEFLEX
 Kearfott Co., Inc.
HERMETICIAN
 Fuste Corp.
HERMICO
 Hermetic Seal Products Co.
HEXAMAG
 Ferroxcube Corp. of America
HEX-LOK
 Boots Aircraft-Nut Corp.
HEX-SCRU
 Stronghold Screw Products Inc.
HEXSEAL
 Automatic & Precision Mfg. Co.
HEYCO
 Heyman Mfg. Co.
H & H
 Arrow-Hart & Hegeman Electric Co.

HI
 Holub Industries, Inc.
HI-BALL
 Radiart Corp.
HI BRITE
 Shannon Luminous Materials Co.
HI DRIVE
 Specialty Battery Co.
HIDE-AWAY
 JFD Mfg. Co., Inc.
HI-EFFICIENCY
 Liberty Mirror Div.,
 Libbey-Owens-Ford Glass Co.
HI-FARAD
 Aerovox Corp.
HI-FLUX
 Annis Co., R. B.
HI-G
 General Controls Co.
HI-GAIN
 Radio Merchandise Sales, Inc.
HI-MAG
 P. R. Mallory & Co., Inc.
HIGH PERMEABILITY '49'
 Carpenter Steel Co.
HIGHWAYMAN
 JFD Mfg. Co., Inc.
HI-KAP
 Centralab Div. of Globe-Union, Inc.
HI-K CERAMICON
 Erie Resistor Corp.
HIKONOL
 Telegraph Condenser Co., Ltd.
HILOSWITCH
 Penn Television Products Co.
HINJON JR.
 Thomas & Betts Co.
HIPERCO
 Westinghouse Electric Corp.
HIPERMALLOY
 United Transformer Co.
HIPERNIK
 Westinghouse Electric Corp.
HIPERSIL
 Westinghouse Electric Corp.
HIPOWER
 Radiart Corp.
HI-Q
 Aerovox Corp.
HIS MASTER'S VOICE
 Radio Corporation of America
HI-TEMP
 Dielectric Materials Co.
HI-TEMP
 Rome Cable Corp.
HI TRONIC
 Bliss Electronic Corp.
HI-V
 Linear Equipment Laboratories
HI-VOLT
 Industrial Devices, Inc.
HI-VO-KAPS
 Centralab Div. of Globe-Union, Inc.

HK
 Dollar Co., Robert
HOBBY-FLEX
 Dumore Co., The

HOLD-TITE
 U. S. Rubber Co.
HOLITE
 Holyoke Wire & Cable Co.
HOLLYTRAN
 Transformer Engineers
HOLLYWOOD VIBRA-TONE
 Fischer & Co., R. A.
HOLMES-ROLLIN
 Rollin Co.
HOLTITE
 Continental Screw Co.
HOLTZER-CABOT
 National Pneumatic Co., Inc.
HOME HEALTH
 Waters Conley Co.
HOMEASE
 Bogue Electric Mfg. Co.
HORNAC
 Horn Co., Inc., A. C.
HORNET
 New York Transformer Co., Inc.
HORTON
 Becker Electronics Mfg. Corp.
HOTSPOT
 Mitchell Industries, Inc.
HOUSE OF HEARING
 Sonotone Corp.
HP
 Hewlett-Packard Co.
H-Q
 Hammarlund Mfg. Co.
HUBBELL
 Hubbell, Inc., Harvey
HUDCO
 Hudson Wire Co.
HUDSON
 Oxford Electric Corp.
HUDSON BAY
 Refrigeration Systems, Inc.
HUMDINGER
 Clarostat Mfg. Co., Inc.
HUMIDIGRAPH
 Bristol Co., The
HUMIDI-SEAL
 Pyramid Electric Co.
HUMIDISTAT
 Minneapolis-Honeywell Regulator Co.
HUMIDOLAIN
 Star Porcelain Co.
HUMIDUSTAT
 Minneapolis-Honeywell Regulator Co.
HURLETRON
 Electric Eye Equipment Co.
HUSITE
 Huse Liberty Mica Co.
HUSHATONE
 Brush Electronics Co.
HUSKY
 Price Electric Corp.
HYCAR
 Goodrich Chemical Co., B. F.
HYDENT
 Burndy Engineering Co. Inc.
HYDEX
 Jensen Mfg. Co.
HYDRAMOTOR
 General Controls Co.
HYDRIFINED
 Magnetic Metals Co.
HYDRIMET
 Metal Hydrides, Inc.
HYDROCODER
 Raymond Rosen Engineering Products,
 Inc.
HYDROGRAF
 Grafo Colloids Corp.
HYDRON
 Clifford Mfg. Co.
HYDROPHEN
 Reichhold Chemicals, Inc.
HYDROSEC
 U. S. Rubber Co.
HYFLEX
 Irvington Varnish & Insulator Co.
HYFLUX ALNICO
 Indiana Steel Products Company
HYGRADE
 Foote Brothers Gear & Machine Corp.
HYGRADE
 Mitchell-Rand Insulation Co., Inc.
HYGRADE
 Markel & Sons, L. Frank
HYGRODIAL
 Friez Instrument Div.,
 Bendix Aviation Corp.
HYHERVAC
 Central Scientific Co.
HYLINK
 Burndy Engineering Co. Inc.
HY LOW
 Stevens Products Inc.
HYLUG
 Burndy Engineering Co. Inc.
HYMU
 Magnetic Metals Co.
HYMU "80"
 Carpenter Steel Co.
HYPASS
 Sprague Electric Co.
HYPENSIL
 Westinghouse Electric Corp.
HYPER
 Radio Music Corp.
HYPER-MAG
 Radio-Music Corp.
HYPERSONIC
 Brush Electronics Co.

HYPERVAC
 Central Scientific Co.
HYPEX
 Jensen Mfg. Co.
HYPOT
 Associated Research, Inc.
HYPRESS
 Burndy Engineering Co. Inc.
HY-PUSS
 Sprague Electric Co.
HY-Q 75
 Hytron Radio & Electronics Corp.
HYRING
 Burndy Engineering Co., Inc.
HYSOL
 Houghton Laboratories Inc.
HYSPAR
 Midland Paint & Varnish Co.
HYSTERSET
 Ward Leonard Electric Co.
HYTEMCO
 Driver-Harris Co.
HYTOOL
 Burndy Engineering Co. Inc.
HYVAC
 Central Scientific Co.
HYVOL
 Aerovox Corp.

ICA
 Insuline Corp. of America
ICE-STIK
 Paisley Products, Inc.
ICONIC
 Altec Lansing Corp.
IDA
 Computer Corp. of America
I. D. C.
 Motorola Inc.
IDEAL
 Melody Master Mfg. Co.
IDECO
 Dresser-Stacey Co.
IHC
 Illinois Condenser Co.
IHT
 Illinois Condenser Co.
ILLINI-HYCAP
 Illinois Condenser Co.
ILLUSTRAVOX
 Electro Engineering & Mfg. Co.
I M C
 Induction Motors Corp.
IMC
 Insulation Manufacturers Corp.
IMCOR
 Insulation Manufacturers Corp.
IMMERSATHERM
 Mercoid Corp.
IMP
 Carter Parts Co.
IMP
 Pyramid Electric Co.
IMPEDOMETER
 Electrodyne Company
IMPERIAL
 Indiana Steel & Wire Co.
IMPERIAL
 Tele-Tone Radio Corp.
IMPREGNITE
 Standard Varnish Works
IMPRUVOL
 Konpers Co., Inc.
IMPULSE SEQUENCE
 Bristol Co., The
INCA
 Phelps Dodge Copper Products Corp.
INCAS
 Sangamo Electric Co.
INCELOID
 American Products Mfg. Co.
INCO
 International Nickel Co., Inc., The
INCONEL
 Alloy Metal Wire Co.
INCONEL
 International Nickel Co., Inc., The
INCOS IL
 Western Gold & Platinum Works
INCREDUCTOR
 C. G. S. Laboratories, Inc.
INCREVOLT
 Sorensen & Co.
INDALLOY
 Indiana Steel Products Company
INDCO
 Industrial Condenser Corp.
INDELCO
 Industrial Electronics Co., Inc.
INDEL-DENT
 Markwik Manufacturing Co., Inc.
INDUCTORIDS
 De Coursey Engineering Lab.
INDUCTOTHERM
 X-Ray Dept. of General Electric Co.
INDUCTUNER
 Mallory & Co., Inc., P. R.
INDUR
 Reilly Tar & Chemical Corp.
INDUSTRIAL TELECEIVERS
 Industrial Television, Inc.
INDUSTRO
 Haloid Co., The
IND-X-MATIC
 Brush Electronics Co.

INERTIAIRE
Westinghouse Electric Corp.

INERTEEN
Westinghouse Electric Corp.

INFERNOCOTE
Wirt Co.

INFRARED
Fostoria Pressed Steel Corp.

INLINE
American Phenolic Corp.

INMANCO
Insulation Manufacturers Corp.

INPUTROL
Wheelco Instruments Co.

IN-RES-CO
Instrument Resistors Co.

INSA-LUTE
Sauerisen Cements Co.

INSANOL
Westinghouse Electric Corp.

INSL
Insl-X Co., Inc.

INSTAGRAPH
Bristol Co., The

INSTANSOLDER
Cole Radio Works

INSTOMATIC
Sanborn Co.

INSULAZED
Magnetic Metals Co.

INSULCON
Stupakoff Ceramic & Mfg. Co.

INSULITE
Extruders, Inc.

INSULUGS
Burdny Engineering Co. Inc.

INSUROK
Richardson Co., The

INTELIN
Federal Telephone & Radio Corp.

INTERCHEMICAL
Precision Scientific Co.

INTERLINK
Federal Telephone & Radio Corp.

INTUC
Insulating Tube Co.

INVAR
Telegraph Construction & Maintenance Co., Ltd.

INVAR "36"
Carpenter Steel Co.

IONOTRON
U. S. Radlum Corp.

IRC
International Resistance Co.

IRIS
American Scientific Co.

IRISH
Orradio Industries, Inc.

IRN
Williams & Co., C. K.

IROQUOIS
Sangamo Electric Co.

IRRADIOMETERS
Sensitive Research Instrument Co.

IRV-O-LITE
Irvington Varnish & Insulator Co.

IRV-O-VOLT
Irvington Varnish & Insulator Co.

ISATRON
Consolidated Engineering Corp.

ISO
Isolantite Mfg. Corp.

ISOMICA
Mica Insulator Co.

ISOMODE
M B Mfg. Co.

ISOPLANE
Motorola, Inc.

ISO-Q
Isolantite Mfg. Corp.

ISO-Q
Motorola, Inc.

ISO-RAMIC
Meck TV, Inc.

ISOTRON
Consolidated Engineering Corp.

ISOTRON
Nuclear Instrument & Chemical Corp.

IT
Illinois Condenser Co.

ITELITE
I-T-E Circuit Breaker Co.

IVI-FLEX
Irvington Varnish & Insulator Co.

IVITHENE
Irvington Varnish & Insulator Co.

IXL
Collyer Insulated Wire Co.

J. L. E.
Entwistle Co., James L.

J-S-C
Jersey Specialty Co.

J-CAP
Jeffers Electronics Div. of Speer Carbon Co.

J P CAPACITOR
Jeffers Electronics Div. of Speer Carbon Co.

JACKNIFE
Radio Merchandise Sales

JACKSON
Vulcan Electric Co.

JADE POWDER
Linick Chemical Co.

JAGABI
Biddle Co., James G.

JAINCOMP
Jacobs Instrument Co.

JAY-BEE-TEE
J-B-T Instruments, Inc.

JECO
Jarvis Electronics Corp.

JERKIT
Littelfuse Inc.

JETFLEX
Cook Electric Co.

JETIE
J F D Mfg. Co., Inc.

JETLINE
Carbonneau Industries, Inc.

JETENNA
JFD Mfg. Co., Inc.

JIFFY-TITE
Millen Mfg. Co.

JK
James Knights Co.

J. M.
Paisley Products, Inc.

JUMBO
JFD Mfg. Co., Inc.

J-W
Johnson-Williams, Ltd.

JUPITER GUM
Paisley Products, Inc.

J-W SNIFFER
Johnson-Williams, Ltd.

K-CAP
Automatic Mfg. Corp.

K 42 B
Westinghouse Electric Corp.

"K" MONEL
International Nickel Co., Inc., The

"KR" MONEL
International Nickel Co., Inc., The

K-TRAN
Automatic Mfg. Co.

KALWOOD
Keller Products Co.

KANTARK
Trico Fuse Mfg. Co.

KANTLINK
Positive Lock Washer Co.

KANT-LINK
American Nut & Bolt Fastener Co.

KAPPA
Wright & Sons Co., William E.

KARADIO
Eckstein Radio & Television Co.

KARBOMET
Driver-Harris Co.

KARMA
Driver-Harris Co.

KARROPAK
Felt Products Mfg. Co.

KASIL
Philadelphia Quartz Co.

KAYDEL
Hart Moisture Gauges Inc.

KAY-LAB
Kalbfeil Labs., Inc.

KATOLIGHT
Kato Engineering Co.

KAYGREY
Rogers Corp.

KAYPAR
Rogers Corp.

KAYROK
Rogers Corp.

KEL-F
Electronic Mechanics, Inc.

KEL-F
Kellogg Co., M. W.

KELLERFLEX
Pratt & Whitney Div., Niles-Bement-Pond Co.

KELLER POLYGRAPH
Associated Research, Inc.

KEMET
Union Carbide & Carbon Co.

KEMGO
Markem Machine Co.

KENCO
Kenwood Engineering Co., Inc.

KENEX
Westinghouse Electric Corp.

KENITE
Keystone Electronics Corp.

KEN-RAD
General Electric Co.

KERATYM
Horn Co., Inc., A. C.

KETOS
Crucible Steel Co. of America

KEYBOARD
Welschel Engineering Co.

KIC
Union Carbide & Carbon Corp.

K-H
Krohn-Hite Instrument Co.

KILO-SWEEP
Kay Electric Co.

KILOVOLT
Caddell-Burns Mfg. Co.

KIN-EX
Vidaire Electronics Mfg. Co.

KINE-LITE
Vidaire Electronics Mfg. Co.

KINE-TEST
Vidaire Electronics Mfg. Co.

KING MARKWELL
Markem Machine Co.

KIRKSITE
National Lead Co.

KLAMP-TITE
I-T-E Circuit Breaker Co.

KLEEN'R
Conrac, Inc.

KLEIN-KOAT
Klein & Sons, Mathias

KLIP-LITE
Cable Electric Products Co.

KLIPOK
Trico Fuse Mfg. Co.

KLIFSCHORN
Klipsch & Associates

KLIPXIT
Vaco Products Co.

KLIPZON
United Technical Laboratories

KLIXON
Spencer Thermostat Div., Metals & Controls Corp.

KLOZURE
Garlock Packing Co.

KLYDONOGRAPH
Westinghouse Electric Corp.

KNEADED
Eberhard Faber Pencil Co.

KNIGHT
Allied Radio Corp.

KNOCKOMETER
Sperry Gyroscope Co., Div. of The Sperry Corp.

KODAGRAPH
Eastman Kodak Co.

KODAK
Eastman Kodak Co.

KODAPAK
Eastman Kodak Co.

KODIFIER
Markwik Manufacturing Co., Inc.

KOHINOOR
Waldes Kohinoor, Inc.

KOILED KORD
Kellogg Switchboard & Supply Co.

KOLORDISK
Centralab Div., Globe Union Inc.

KONAL
Westinghouse Electric Corp.

KON-NEC-TOR
General Electric Co.

KOOLOHM
Sprague Electric Co.

KOTAL
U. S. Rubber Co.

KOTRON
Standard Arcturus Corp.

KOVAR
Stupakoff Ceramic & Mfg. Co.

KOVAR
Westinghouse Electric Corp.

KOVAR-ZIP
Waldes Kohinoor, Inc.

KRISTON
Goodrich Chemical Co., B. F.

KROME KOAT
General Cement Mfg. Co.

KRYSTAL KOAT
General Cement Mfg. Co.

K-TRAN
Automatic Mfg. Corp.

KUPEC
Centralab Div., Globe Union, Inc.

KULGRID
Sylvania Electric Products, Inc.

KUM-KLEEN
Avery Adhesive Label Corp.

KURMELER
Kurman Electric Co., Inc.

K-V-O
Sprague Electric Co.

KWIKFLUX
Special Chemicals Co.

KWIK-KALL
Loge Sound Engineers, J. M.

"L" NICKEL
International Nickel Co., Inc.

LB
Louis Bros.

LAB-BILT
Specialty Battery Co.

LABCASE
Berkshire Laboratories

LABCHECK
Berkshire Laboratories

LABMARKER
Berkshire Laboratories

LABOHM
Berkshire Laboratories

LABPEAK
Berkshire Laboratories

LABRECT
Berkshire Laboratories

LABSTROBE
Berkshire Laboratories

LABTEST
Berkshire Laboratories

LABTRANS
Berkshire Laboratories

LABVAR
Berkshire Laboratories

LABVOLT
Berkshire Laboratories

LABVOLT
Electrodyn Co.

LAMCO
La Magna Mfg. Co., Inc.

LAMICOID
Mica Insulator Co.

LAMICOID
Insulating Fabricators, Inc

LAMICORES
Magnetic Metals Co.

LAMINAC
American Cyanamid Co.

LAMPACKS
Magnetic Metals Co.

LAMITEX
Franklin Fibre-Lamitex Corp.

LAURETT
Laurehk Radio Mfg. Co.

LAUXEIN
Monsanto Chemical Co.

LAUXITE
Monsanto Chemical Co.

LAVA
Kirchberger & Co., Inc., M.

LAVA
Maryland Lava Co.

LAVITE
Steward Mfg. Co., D. M.

LAVOLAIN
Star Porcelain Co.

LAYTEX
U. S. Rubber Co.

LAZY-X
Radiart Corp.

L-C CHECKER
Aerovox Corp.

LEAK
British Industries Corp.

LEARADIO
Lear, Inc.

LEARAVIAN
Lear, Inc.

LEARMATIC
Lear, Inc.

LEARTRON
Lear, Inc.

LEATHAFLEX
Paisley Products, Inc.

LECTURN
J. M. Loge Sound Engineers

ELECTROFORMED
Bart Laboratories, Co., Inc.

ELECTROPACK
Telegraph Condenser Co., Ltd.

ELECTROVISION
Transvision, Inc.

LEDEX
Leland, Inc., G. H.

LEESONA
Universal Winding Co.

L-F
Liebel-Flarshelm Co.

LEKTRO
Conn Ltd., C. G.

LE-LAND
Leland Electric Co.

LERO
Lynn Electronic Research Co.

LEROY
Keuffel & Esser Co.

LEVEL
White Rodgers Elec. Co.

LIECO
Lerner Instrument & Electronics Mfg. Corp.

LIFE-LINE
Westinghouse Electric Corp.

LIFE SAVER
Cole Radio Works

LIFETONE
Duotone Co., Inc.

LIGHT WATCHMAN
Ripley Co., Inc.

LIGHTNING
Vaco Products Co.

LIGHTNING BOLT
General Fuse Co.

LIGHTNING BUG
Vibroplex Co., Inc.

LIGNOTITE
Paisley Products, Inc.

LIGNOTOX
Paisley Products, Inc.

LIMITEMP
Westinghouse Electric Corp.

LIMITROL
Wheelco Instruments Div. Barber-Colman Co.

LIMITRON
Arma Corp.

LIN-DE
Linde Air Products Co. Unit of Union Carbide & Carbon Corp.

LINDOX
Linde Air Products Co. Unit of Union Carbide & Carbon Corp.

LINEAR STANDARD
United Transformer Co.

LINEATOR
Airborne Accessories, Inc.

LINE-O-FLO
Barber-Colman Co.

LINE-O-LIFE
Carter Motor Co.

LINE-O-POWER
Footo Brothers Gear & Machine Corp.

LINE STARTER
Westinghouse Electric Corp.
LINICON
United Condenser Corp.
LINK-LOCK
Simmons Fastener Corp.
LINVAR
Muirhead & Co., Ltd.
LITE-GAGE
Photocon Research Products
LITE-O-STAT
Viewlex, Inc.
LITHALOID
Haloid Co., The
LITHOFAX
Western Union Telegraph Co.
LITHOFORM
American Chemical Paint Co.
LITTLE DEVIL
Ohmite Mfg. Co.
LITTLE GEM
Sickles Co., F. W. Div. General Instrument Corp.
LITTLE GIANT
Crucible Steel Co. of America
LITTLE GIANT
JFD Mfg. Co., Inc.
LITTLE MAJOR
Arro Expansion Bolt Co.
LLOYD'S
Johnson Mfg. Co., Inc.
LOADBOND
Catalin Corp. of America
LOADED-X
Radiart Corp., The
LOALIN
Catalin Corp. of America
LO-C
Linear Equipment Laboratories
LOCALITE
Fostoria Pressed Steel Corp.
LOCKIT
Tele-Ex-Pand Products Sales Corp.
LOCK-O-SEAL
Wolfe Co., Inc., Franklin C.
LOCKSEAM
Superior Tube Co.
LOCK-TITE
Continental Screw Co.
LOCK-TITE
Thomas & Betts Co.
LOFYLD
Millivac Instrument Corp.
LOGATEN
Kalbfell Labs., Inc.
LOGE LECTERN
Loge Sound Engineers, J. M.
LOGGER
Audio Instrument Co., Inc.
LOHM
Driver-Harris Co.
LOMU
Magnetic Metals Co.
LONG RANGER
Ward Products Corp. Div of The Garbriel Co.
LOOPHOM
Ward Leonard Electric Co.
L. P.
Hickok Electrical Instrument Co.
LOS GATOS
Lewis & Kaufman, Ltd.
LOXIT
Scovill Mfg. Co.
L'TATRO
Eckstein Radio & Television Co.
LUCERO
Driver-Harris Co.
LUCITE
du Pont de Nemours & Co., Inc., E. I.
LUCY STRIKE
Precision Radiation Instruments Inc.
LUG-CLIP
Littelfuse, Inc.
LUKENWELD
Lukens Steel Co.
LUXIDE
Celanese Corp. of America
LUMARITH
Celanese Corp. of America
LUMENAR
Heiland Research Corp.
LUMETRON
Photovolt Corp.
LUSTERIZED
American Electric Cable Co.
LUSTERLAC
American Electric Cable Co.
LUSTREX
Monsanto Chemical Co.
LUSTROM
Monsanto Chemical Co.
LUXAN
Rauland Corp.
LUMAPANE
Rauland Corp.
LUXIFLUX
Special Chemicals Co.
LUXOLENE
DeLuxe Coils, Inc.
LUXOR
Ace Mfg. Corp.
LUXTAR
Viewlex, Inc.
LUXTRON
Bradley Labs., Inc.

LYNN
Vaco Products Co.
LYRIC
Rauland-Borg Corp.

M-101
Telectronic Laboratories, Inc.
M-C-R-W-S
Stevens Mfg. Co., Inc.
MACADIE
British Industries Corp.
MAESTRO
Reeves Soundcraft Corp.
MAGATAPE
Crestwood Recorder Co.
MAGIC CIRCLE
A.R.F. Products, Inc.
MAGICORES
Crowley & Co., Inc., Henry L.
MAGIC RIBBON
Brush Electronics Co.
MAGIC WAND
Ward Products Corp.
MAGIFLEX
Div. of The Gabriel Co.
MAGIMOTOR
Transradio, Ltd.
MAGMOTOR
Carter Motor Co.
MAGNAC
Magnetic Devices, Inc.
MAGNADUR
Ferroxcube Corp. of America
MAGNAGLO
Magnaflux Corp.
MAGNA-STRIPE
Reeves Soundcraft Corp.
MAGNATELE
Electro Engineering & Mfg. Co.
MAGNATONE
Magna Electronics Co.
MAGNEBRAKE
Vickers, Inc.
MAGNECLUTCH
Vickers, Inc.
MAGNECORDER
Magnecord, Inc.
MAGNECORDETTE
Magnecord, Inc.
MAGNEFLUX
Lear, Inc.
MAGNELOOP
Amplifier Corp. of America
MAGNEMATIC
Amplifier Corp. of America
MAGNEMITE
Amplifier Corp. of America
MAGNEMUSE
Amplifier Corp. of America
MAGNEPAINT
Micro-Circuits Co.
MAGNEPASTE
Micro-Circuits Co.
MAGNERAMA
Amplifier Corp. of America
MAGNERASER
Amplifier Corp. of America
MAGNERIBBON
Amplifier Corp. of America
MAGNESCOPE
Amplifier Corp. of America
MAGNESIL
Magnetics, Inc.
MAGNESYN
Eclipse-Pioneer Div., Bendix Aviation Corp.
MAGNETAPE
Amplifier Corp. of America
MAGNETEX
Califone Corp.
MAGNETONE
Brush Electronics Co.
MAGNETORQUE
Avion Instrument Corp.
MAGNETRONIC
Cook Electric Co.
MAGNETTE
Heinemann Electric Co.
MAGNETWIN
Amplifier Corp. of America
MAGNILASTIC
Cook Electric Co.
MAGNISET
Bristol Co., Inc.
MAGNIVOLT
Inet, Inc.
MAGNO
Driver-Harris Co.
MAGNOGRAPH
Offner Electronics, Inc.
MAGNORITE
Norton Co.
MAIL-A-VOICE
Brush Electronics Co.
MALLOCENE
Mallory & Co., Inc., P. R.
MALLOSIL
P. R. Mallory & Co., Inc.
MALTESE
Bache & Co., Semon
MAMCO
Master Appliance Mfg. Co.
MAPICO
Columbian Carbon Co.

MARBELITE
Good-All Electric Mfg. Co.
MARCOL
Esso Standard Oil Co.
MARCONITE
Marconi Wireless Telegraph Co., Ltd.
MARI-G-DE
Bludworth Marine Div., National-Simplex-Bludworth, Inc.
MARINE ARROW
Bludworth Marine Div., National-Simplex-Bludworth, Inc.
MARINE PILOT
Bludworth Marine Div., National-Simplex-Bludworth, Inc.
MARINER
JFD Mfg. Co., Inc.
MARINERS PATHFINDER
Raytheon Mfg. Co.
MARK-TIME
Rhodes Inc., M. H.
MARKA-SWEEP
Kay Electric Co.
MARK-N-COUNT
May Co., Donald M.
MARS
Staedtler Inc., J. S.
MARS-LUMOGRAPH
Staedtler, Inc., J. S.
MASCO
Simpson Mfg. Co., Inc., Mark
MASTERLOUIT
Kellogg Switchboard & Supply Co.
MASTERPHONE
Kellogg Switchboard & Supply Co.
MASTERPRO
Rek-O-Kut Co.
MASTERTAPE
Audio-Master Corp.
MATSURF
Arkwright Finishing Co.
MAXIMAR
X-Ray Dept. of General Electric Co.
MAXI-POWER
Foote Brothers Gear & Machine Corp.
MAXISCOPE
X-Ray Dept. of General Electric Co.
MAX MIXER
Special Products Co.
M. B. C.
Ray-O-Vac Co.
MCA
Molding Corp. of America
MEASURTEST
Marconi Instruments Ltd.
MECATORN
Torgren Co., Inc., C. W.
MECHA
Servomechanisms, Inc.
MECHANI-SEAL
Fafnir Bearing Co.
MEDIQUARTZ
Dallons Labs.
MEDI-SINE
Dallons Labs.
MEDI-SONAR
Dallons Labs.
MEDI-SURGICAL
Dallons Labs.
MEDITHERM
Dallons Labs.
MEFCO
Production Engineering Co.
MEG-METER
Winslow Co., Inc., The
MEGA-MARKER
Kay Electric Co.
MEGA-MATCH
Kay Electric Co.
MEGA-NODE
Kay Electric Co.
MEGA-PIPPER
Kay Electric Co.
MEGA-PIX
Kay Electric Co.
MEGA-PULSER
Kay Electric Co.
MEGASTYRENE
Transradio, Ltd.
MEGA-SWEEP
Kay Electric Co.
MEGALIGNER
Kay Electric Co.
MEGALYZER
Kay Electric Co.
MEGALYZER JR.
Kay Electric Co.
MEGATENNA
Kay Electric Co.
MEGAVAC
Central Scientific Co.
MEGA-X
Kay Electric Co.
MEGGER
Biddle Co., James G.
MEGOHMER
Sticht Co., Inc., Herman H.
MEG-O-MAX
Sprague Electric Co.
MEL
Measurement Engineering, Ltd.
MELCOAT
Melpar, Inc.
MELCOR
Melpar, Inc.
MELLOTONE
Electron Enterprises

MELMAC
American Cyanamid Co.
MELODIER
Waters Conley Co.
MELODISC
Home Recording Products Corp.
MELPAK
Melpar, Inc.
MEMOBELT
Dictaphone Corp.
MEMOSCOPE
Millivac Instrument Corp.
MEMOSTAT
Minnesota Electronics Corp.
MERCTRON
Ebert Electronics Corp.
MERCU-TROL
Mack Electrical Devices, Inc.
MERCURY
Electro-Voice, Inc.
MERCURY
Kemite Labs.
MERCURY
Vulcan Electric Co.
MERCURYSTAT
Westinghouse Electric Corp.
MERITONE
American Laubscher Corp.
MERITONE
Autocrat Electronics Co.
MERITONE
American Laubscher Corp.
MERITONE-LAUBSCHER
American Laubscher Corp.
MERITUNE
Polytech Devices, Inc.
MERL
Miller Research Laboratories
META-BASAL PORTABLE
Electro-Physical Laboratories, Inc.
METAL MIKE
Sperry Gyroscope Co.
METAL SHIELDED WIRE
Uniform Tubes
METALASTIC
Cook Electric Co.
METALBOSS
Telegraph Condenser Co., Ltd.
METALCLAD
Battery Division, Burgess Battery Co.
METALITE
Astron Corp.
METALIX
North American Philips Co., Inc.
METALMITE
Telegraph Condenser Co., Ltd.
METALPACK
Telegraph Condenser Co., Ltd.
METALSEAL
Brush Electronics Co.
METAMETER
Bristol Co., The
METAPHONE
Bristol Co., The
METAPLATING
Metaplast Process, Inc.
METAVANE
Bristol Co., The
METCLAD
I-T-E Circuit Breaker Co.
METEOR
Astron Corp.
METERMAX
Leeds & Northrup Co.
METEROL
Automatic Temperature Control Co.
METEX
Metal Textile Corp.
METL-CAN
Pyramid Electric Co.
MET-L-FLEX
Robinson Aviation, Inc.
METRO-LITE
Viewlex, Inc.
METRONOMA
Crystal Research Labs, Inc.
METRONICS
Metropolitan Electronics & Instrument Co.
METROSCOPE
Photocon Research Products
METROTHERM
General Controls Co.
METSO
Philadelphia Quartz Co.
MEX
U. S. Graphite Co., Div. of The Wickes Corp.
MEXACOTE
U. S. Graphite Co., Div. of The Wickes Corp.
MEXALLOY
U. S. Graphite Co., Div. of The Wickes Corp.
MEXATOP
U. S. Graphite Co., Div. of The Wickes Corp.
MEXICAN
U. S. Graphite Co., A Div. of The Wickes Corp.
MEXITE BRIQUETTES
U. S. Graphite Co., Div. of The Wickes Corp.
MIC
Molded Insulation Co.

MICABOND
Continental-Diamond Fibre Co.

MICADISC
Telegraph Condenser Co., Ltd.

MICAFIL
Cosa Corp.

MICA-GLAS
National Electric Coil Co.

MICANITE
Mica Insulator Co.

MICARTA
Westinghouse Electric Corp.

MICO
Mica Insulator Co.

MICRO
Minneapolis-Honeywell Regulator Co.

MICRO
New Hampshire Ball Bearings, Inc.

MICROACT
Bristol Co., The

MICRO-CAL
Cubic Corp.

MICRO CIRCLE
Precise Measurements Co.

MICRODIAL
Borg Equipment Div.
The George W. Borg Corp.

MICRODOT
Felts Corp.

MICRODRILL
Teletronics Laboratory, Inc.

MICRODUAL
Transradio, Ltd.

MICRODYNE
Audak Co.

MICROFLASH
General Radio Co.

MICROFLEX
Eagle Signal Corp.

MICROLINE
Sperry Gyroscope Co., Div. of
The Sperry Corp.

MICROLITE
Glass Fibers, Inc.

MICROLYTIC
Micamold Radio Corp.

MICROMATCH
Jones Electronics Co., M. C.

MICROMAX
Leeds & Northrup Co.

MICRO-MIKER
Kalbfell Labs., Inc.

MICROMITE
Telegraph Condenser Co., Ltd.

MICROMOTORS
Redmond Co., Inc.

MICRO-NAMIC
Micro Balancing, Inc.

MICROPACKS
Telegraph Condenser Co., Ltd.

MICROPAINT
Micro-Circuits Co.

MICROPOSITIONER
Barber-Colman Co.

MICROPOT
Borg Equipment Div.,
George W. Borg Corp.

MICRO-PULSER
Kav Electric Co.

MICRO-RELAY
Terado Co.

MICROSEN
Manning, Maxwell & Moore, Inc.

MICRO-SET MANOSTAT
Precision Scientific Co.

MICROCORES
Magnetic Metals Co.

MICROSIL
Magnetic Metals Co.

MICROTESTERS
Simpson Electric Co. Div.,
American Gage & Machine Co.

MICROTHERM
Barber-Colman Co.

MICROTHERM
Raytheon Mfg. Co.

MICROTORQUE
Giannini & Co., Inc., G. M.

MICRO-TROLLER
Westinghouse Electric Corp.

MICROTOMIC
Eberhard Faber Pencil Co.

MICROTRAN
Crest Laboratories, Inc.

MICROVAC
Stokes Machine Co., F. J.

MICROVOLT
Ferris Instrument Co.

MICROWALL
Rex Corp.

MICROWEAVE
Holliston Mills Inc., The

MIDDLESEX
Bogen Co., Inc., David

MIDGET
Sprague Electric Co.

MIDGETALK
Simpson Mfg. Co., Inc., Mark

MIDGETROL
Mallory & Co., Inc., P. R.

MIDOHM
Driver-Harris Co.

MIDWAY
Cardwell Mfg. Corp., Allen D.

MIJAKON
Fast & Co., John E.

MIKASUB
Fast & Co., John E.

MIKE
Cornell-Dubilier Electric Corp.

MIL-LINE
Radell Corp.

MILCO
Miller Mfg. Co., M. A.

MILLISEC
Stevens-Arnold, Inc.

MINALITE
Westinghouse Electric Corp.

MINATROL
Westinghouse Electric Corp.

MINI-AMP
Industrial Devices, Inc.

MINI-CHOPPER
Servomechanisms, Inc.

MINIGANG
Giannini & Co., Inc., G. M.

MINIGRAPH
Westinghouse Electric Corp.

MINI MAX
National Carbon Division,
Union Carbide & Carbon Corp.

MINIMITE
Astron Corp.

MINI-NOISE
Microdot Division, Felts Corp.

MINISCALER
Atomic Instrument Co.

MINISEL
Electronic Devices, Inc.,
Precision Rectifier Div.

MINI-SHIELD
Staver Co., Inc.

MINI-SIGNAL
Premier Crystal Labs., Inc.

MINI-SPRING
Staver Co., Inc.

MINITAPE
Stancil-Hoffman Corp.

MINI-VOLT
Industrial Devices, Inc.

MIN-KAPS
Centralab Div. of Globe-Union, Inc.

MINSUA
Keuffel & Esser Co.

MINUTE MAN
Ward Products Corp.,
Div. of The Gabriel Co.

MIRACLE POINT
Gerett Corp., M. A.

MIRADO
Eagle Pencil Co.

MIRAGLAS
Mitchell-Rand Insulation Co., Inc.

MIROC
Mitchell-Rand Insulation Co., Inc.

MIROPOINT
Duotone Co., Inc.

MIRROPANE
Liberty Mirror Div.,
Libbey-Owens-Ford Glass Co.

MIRRORTONE
Meck TV, Inc.

MIRROSCOPE
Simpson Electric Co., Div.,
American Gage & Machine Co.

MI-TEE-RAY
Fretco Television Co., Inc.

M. L. S.
Paisley Products Inc.

M. M. M.
Midwest Molding & Manufacturing Co.

MOBIL-MIKE
Electro-Voice, Inc.

MODIFIED HILO
Driver Co., Wilbur B.

MODUFLOW
Minneapolis-Honeywell Regulator Co.

MODULINE
Sprague Electric Co.

MODULITE
Berndt-Bach, Inc.

MODUTROL
Minneapolis-Honeywell Regulator Co.

MODU-WAVE
Sciaky Bros., Inc.

MOHICAN
Sangamo Electric Co.

MOLDARTA
Westinghouse Electric Corp.

MOLDITE
National Moldite Co.

MOLDLOCK
American Brass Co.

MOLDTEX
Racon Electric Co.

MOLDTITE
United Condenser Corp.

MOLECULE SQUEEZER
Robinette Co., W. C.

MONEL
International Nickel Co., Inc.

MONISEAL
Magnetic Metals Co.

MONISEAL "444"
Carpenter Steel Co.

MONITORADIO
Radio Apparatus Corp.

MON-KEY
Electric Eye Equipment Co.

MONOBAR
Tibbetts Industries, Inc.

MONOBLOC
Winchester Electronics Co.

MONOCOIL
Kupfrian Mfg. Co.

MONO-DRUM
Gorrell & Gorrell

MONOMOTORS
Redmond Co., Inc.

MONO-PAC
Beltone Hearing Aid Co.

MONOPHONE
Automatic Electric Co.

MONOPLEX
Shure Brothers, Inc.

MONOSET
Bristol Co., The

MONOSET
Telex, Inc.

MONOTUBE
Tuttle & Kift

MORCO
Moore Co., Howard J.

MORCON
Moore Co., Howard J.

MORFLEX
Moore Co., Howard J.

MORICONE
Moore Co., Howard J.

MORSE EUREKA
Morse Co., Frank W.

MORTEX
Moore Co., Howard J.

MORVAM
Moore Co., Howard J.

MOTO-MAGS
Keystone Products Co.

MOTO-MITE
Globe Industries, Inc.

MOTROLITE
Ward Leonard Electric Co.

MOTOR WATCHMAN
Westinghouse Electric Corp.

MOT-O-TROL
Westinghouse Electric Corp.

MOTRON
Robinette Co., W. C.

MPB
Miniature Precision Bearings, Inc.

MSRD
Menlo Research Laboratory

M-SCOPE
Fisher Research Lab.

MU
Acro Mfg. Co.

MUCHROHM
Magnetic Metals Co.

MUFAX
Muirhead & Co., Ltd.

MULLARD
International Electronics Corp.

MUL-TEL
Brach Mfg. Corp.

MULTI-ANALYST
Electronic Instrument Co., Inc.

MULTICARDIOTRON
Electro-Physical Labs.

MULTICORE
British Industries Corp.

MULTICOUNTER
Atomic Instrument Co.

MULTICOUPLER
Amy, Aceves & King, Inc.

MULTIFLEX
Eagle Signal Corp.

MULTI-GATE
Hammarlund Mfg. Co.

MULTI-LOW-RANGE
Dillion & Co., Inc., W. C.

MULTI-MASTER
Precision Apparatus Co. Inc.

MULTIMET
Haynes Stellite Co.
Division of Union Carbide & Carbon Corp.

MULTIMETER
Rawson Electrical Instrument Co.

MULTIPLANE
Lord Mfg. Co.

MULTIPLE-SHOT
Gits Molding Corp.

MULTIPOT
Ford Engineering Co.

MULTIPOWER
E. A. Myers & Sons

MULTI-PULSER
Kay Electric Co.

MULTI-RECTIFIER
Green Electric Co., Inc.

MULTISCALER
Atomic Instrument Co.

MULTISCOPE
Acme Telectronix Div.
Nea Service Inc.

MULTISOURCE
Applied Research Labs.

MULTI-SPEED
Pentron Corp.

MULTI-SWAGE
Bead Chain Mfg. Co.

MULTITROL
Ward Leonard Electric Co.

MULTIVIDEO
Industrial Television, Inc.

MULTIVISION
Industrial Television, Inc.

MULTIVOLT
Ohmite Mfg. Co.

MULTRON
Avion Instrument Corp., Div. of
American Car & Foundry Co.

MUL-TV
Jerrold Electronics Corp.

MUMETAL
Telegraph Construction &
Maintenance Co., Ltd.

MU NET
Sickles, F. W. Div.
General Instrument Corp.

M-UNIT
Gorrell & Gorrell

MUROSCOPE
Simpson Electric Co. Div. of
American Gage & Machine Co.

MUSIC MASTER
M. P. Engineering Co.

MUSIC MASTER
Sonic Industries, Inc.

MUSIKING
Symphony Radio & Television Corp.

MUTED-STYLUS
Shure Brothers, Inc.

M/W GAIN SET
Kay Electric Co.

MX
Teletronic Laboratories, Inc.

MYKAPLAST
United Condenser Corp.

MYKE-A-TROL
Industrial Electronics, Inc.

MYKROY
Electronic Mechanics, Inc.

NA-ALD
Alden Products Co.

NALCO
National Lead Co.

NALCO
North American Electric Lamp Co.

NAMCO
National Acme Co.

NARCIO
National Research Corp.

NARCO
National Aeronautical Corp.

NARCO OMNIGATOR
National Aeronautical Corp.

NARCO OMNIBLOWER
National Aeronautical Corp.

NASAT
Westinghouse Electric Corp.

NATCO
National Tel-Tronics Corp.

NATIONAL
Valco Mfg. Co.

NAUGAHYDE
U. S. Rubber Co.

NAVAJO
Sangamo Electric Co.

NAVAREE
Videon Electronic Corp.

N-CAPS
Eastern Precision Resistor Corp.

NEG-ATOR
Hunter Spring Co.

NEOLAC
U. S. Stoneware Co.

NEMCO
National Electronic Mfg. Corp.

NEOLAY
U. S. Rubber Co.

NE-O-LITE
General Cement Mfg. Co.

NEPCO
National Electric Products Co.

NEPEC
Centralab Div.,
Globe Union Inc.

NESTIER
Doepke Mfg. Co., Inc., Chas. Wm.

NEUTRASEAL
Cook Electric Co.

NEVERSLIP
Philadelphia Steel & Wire Corp.

NEVI
Northern Electronic & Vacuum Industries

NEYDIUM
Ney Co., J. M.

NEY-ORO
Ney Co., J. M.

NICAD
Nickel Cadmium Battery Corp.

NICHROME
Driver-Harris Co.

NICORO
Western Gold & Platinum Works.

NIFER
Metals & Controls Corp.,
General Plate Div.

MILSTAIN
Driver Co., Wilbur B.

NILVAR
Driver-Harris Co.

999 "PLUS"
Handy & Harman

NIREX
Driver-Harris Co.

NITE-T-LITE
Littelfuse, Inc.

NITRON
Monsanto Chemical Co.

NITRONEAL
Baker & Co., Inc.

NIVAC
Vacuum Metals Corp.

NOARK
Federal Electric Products Co.

NOBATRON
Sorensen & Co., Inc.

- NOBLELOY**
Continental Carbon, Inc.
- NOBLEWEST**
Noble & Westbrook Mfg. Co.
- NOBRUSH**
Georator Corp.
- NOFLAME-COR**
Cornish Wire Co.
- NOISERASER**
Minnesota Electronics Corp.
- NOKORODE**
Dunton Co., D. W.
- NOMU**
Magnetic Metals Co.
- NON-LINK**
Positive Lock Washer Co.
- NONSTRIP**
Rex Corp.
- NO-OX**
Schott Co., Walter L.
- NORBIDE**
Norton Co.
- NORELCO**
North American Philips Co., Inc.
- NORTHEAST**
Delco Appliance Div.
General Motors Corp.
- NTC**
Keystone Carbon Co., Inc.
- N. U.**
National Union Radio Corp.
- NU-BLAC**
Star Porcelain Co.
- NU-BLOK**
United Mfg. & Service Co.
- NU BLOK, JR.**
United Mfg. & Service
- NU-BRAZEE**
American Silver Co., Inc.
- NUCAMITE**
National Union Radio Corp.
- NUCLEOMETER**
Radiation Counter Laboratories, Inc.
- NUKEMITE**
Nukem Products Corp.
- NU PAMITE**
National Union Radio Corp.
- NUSO**
Esso Standard Oil Co.
- NU TIP**
Mallory & Co., Inc., P. R.
- NWL**
Nothelfer Winding Labs.
- NU WRINKLE CAP**
Mallory & Co., Inc., P. R.
- NYFORM**
Acme Wire Co.
- NYLASINT**
Polymer Corp.
- NYLATRON**
Polymer Corp.
- NYLOCLIP**
Burndy Engineering Co. Inc.
- NYLEX**
Boston Insulated Wire & Cable Co.
- NYLOK**
Production Engineering Co.
- NYLON**
du Pont de Nemours & Co., Inc., E. I.
- NYLONITE**
Plastic Wire & Cable Corp.
- NYLON-ZIP**
Waldes Kohinoor Inc.
- OAKWOOD**
Osborn Products
- OCTOHL**
Eastman Kodak Co.
- OHIO**
Ohio Carbon Co.
- OHMAX**
Driver-Harris Co.
- OHMOID**
Wilmington Fibre Specialty Co.
- OHM-SPUN**
States Co.
- OILDAG**
Acheson Colloids Co.
- OILMITE**
Tobe Deutschmann Corp.
- OKLIP**
Burndy Engineering Co., Inc.
- OKOBESTOS**
Okonite Co.
- OKOGLASS**
Okonite Co.
- OKOLENE**
Okonite Co.
- OKOLITE**
Okonite Co.
- OKOPRENE**
Okonite Co.
- OKOSEAL**
Okonite Co.
- OMNI-GLOW**
Industrial Devices, Inc.
- OPALON**
Monsanto Chemical Co.
- OPTIMATIC**
Minneapolis-Honeywell Regulator Co.
- OPTIMIKE**
Instrument Development Laboratories, Inc.
- OPTO-MATIC**
Trico Fuse Mfg. Co.
- ORIENTER**
Lear, Inc.
- ORPHEUS**
International Research Associate
- ORTHOFILTER**
Orthon Corp., The
- ORTHONIK**
Armco Steel Corp.
- ORTHONIK**
Westinghouse Electric Corp.
- ORTHONOL**
Magnetics, Inc.
- ORTHOSIL**
Thomas & Skinner Steel Products Co.
- ORTHOSONIC**
Electronic Labs., Inc.
- OSAGE**
Linick Chemical Co.
- OSAGE**
Sangamo Electric Co.
- OSCILLATRON**
Vectron, Inc.
- OSCILLO-TRACER**
Waters, Inc., Robert A.
- OSCILLO-RECORD**
Fairchild Camera & Instrument Corp.
- OSCILLOCLAST**
Electronic Medical Foundation
- OSISO**
Westinghouse Electric Corp.
- OUNCER**
United Transformer Corp.
- OWNER**
United Transformer Co.
- OXYHEMOGRAPH**
Photocon Research Products
- OXWELD**
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
- OZALID**
General Aniline & Film Corp.
- OZAMATIC**
Ozalid Div. General Aniline & Film Corp.
- P & B**
Potter & Brumfield
- P-28**
Cook Ceramic Mfg. Co.
- PACE-SETTER**
J F D Mfg. Co., Inc.
- PACEMAKER**
Electrodyne Co.
- PACKMASTER**
Radio Specialty Mfg. Co.
- PAISOL**
Paisley Products, Inc.
- PAISTEX**
Paisley Products, Inc.
- PAISTIC**
Paisley Products, Inc.
- PAISTICK**
Paisley Products, Inc.
- PAKAP**
Audio Products Corp.
- PALINEY**
Ney Co., J. M.
- PAL**
Palmnut Co., Inc.
- PANADAPTOR**
Panoramic Radio Products, Inc.
- PANALYZOR**
Panaromac Radio Products, Inc.
- PANARAMA**
JFD Mfg. Co., Inc.
- PANDEX**
Westinghouse Electric Corp.
- PANDUX**
Pacific Transducer Corp.
- PANEL**
Dzus Fastener Co., Inc.
- PANELYTE**
St. Regis Sales Corp.
- PAN-I-LITE**
Alden Products Co.
- PANORADIO**
Panoramic Radio Products, Inc.
- PANORAMSCOPE**
Panoramic Radio Products, Inc.
- PANOSCOPE**
Panoramic Radio Products, Inc.
- PANTO**
Preis Engraving Machine Co.
- PAPERITE**
Acme Wire Co.
- PARA-CON**
Ward Products Corp.,
Div. of The Gabriel Co.
- PARACORE**
U. S. Rubber Co.
- PARA-FLUX**
Radio Music Corp.
- PARAFORMED**
Paramount Paper Tube Corp.
- PARAGON**
Keuffel & Esser Co.
- PARALEAD**
Chester Cable Corp.
- PARISIANOID**
Parisian Novelty Co.
- PARTEK**
Magnaflex Corp.
- PATHFINDER**
Sangamo Electric Co.
- PATRICIAN**
Electro-Voice, Inc.
- PATRONIC**
SOS Cinema Supply Corp.
- PATTERSON**
du Pont de Nemours & Co., Inc., E. I.
- PAWNEE**
Sangamo Electric Co.
- PDCP**
Phelps Dodge Copper Products Co.
- P. E. C.**
Centralab Div.
Globe Union Inc.
- P.E.C.**
Precision Electronic Components Ltd.
- PECO**
Pacific Electriccord Co.
- PEDASINE**
Fisher & Co., R. A.
- PEERLESS**
Altec Lansing Corp.
- PEERLESS**
National Vulcanized Fibre Co.
- PEE-CEE**
Printed Cellophane Tape Co.
- PEE-WEE**
Mueller Electric Co.
- PELCO**
Product Engineering Laboratories, Inc.
- PEL-X**
Holliston Mills, Inc., The
- PEM**
Penn Engineering & Mfg. Corp.
- PENACOLITE**
Koppers Co., Inc.
- PENDET**
Centralab Div. of
Globe-Union, Inc.
- PENGUIN**
Daniels, Inc., C. R.
- PENNALLOY**
Penn Television Products Co.
- PENNVUE**
Penn Television Products Co.
- PERCEPTOSCOPE**
Sonotone Corp.
- PERFECT-O-CUT**
Tablet & Ticket Co.
- PERKINS**
Westinghouse Electric Corp.
- PERMACELL**
U. S. Rubber Co.
- PERMADINE**
American Chemical Paint Co.
- PERMAKAY**
Motorola, Inc.
- PERMALLOY**
Arnold Engineering Co.
- PERMANICKEL**
International Nickel Co., Inc.
- PERMANITE**
Foote Mineral Co.
- PERMANITE**
I-T-E Circuit Breaker Co.
- PERMA-POWER**
General Transformer Corp.
- PERMASEAL**
Sprague Electric Co.
- PERMA-STAT**
Trans-Gel Products, Inc.
- PERMA-SWITCH**
Centralab Div. of
Globe-Union, Inc.
- PERMATAGS**
Actioncraft Products
- PERMENDUR**
Arnold Engineering Co.
- PERMENDUR**
Telegraph Construction &
Maintenance Co., Ltd.
- PERMENORM**
Arnold Engineering Co.
- PERMO**
Fidelitone, Inc.
- PERMO COMPOUNDS**
Hardman Co., Inc., H. V.
- PERMO-MAGNETIC**
Fidelitone, Inc.
- PERMO-SWITCH**
Centralab Div. of Globe-Union, Inc.
- PETITE**
Mitchell Industries, Inc.
- PFAN-TONE**
Pfanstiehl Chemical Co.,
- PFAN-WOOD**
Pfanstiehl Chemical Co.
- PHANTOM**
Ward Products Corp. Div. of
The Gabriel Co.
- PHASEFORMER**
Eastern Specialty Co.
- PHENOCOTE**
Wirt Co.
- PHENOFLEX**
Dielectric Materials Co.
- PHENOL FIBRE**
Taylor Fibre Co.
- PHENOLITE**
National Vulcanized Fibre Co.
- PHENOWELD**
Hardman Co., Inc., H. V.
- PHILHARMONIC**
Espy Mfg. Co., Inc.
- PHIL-TROL**
Phillips Control Corp.
- PHONOLA**
Waters Conley Co.
- PHONOPHRAGMS**
Magnetic Metals Co.
- PHONOSTROBE**
Berkshire Laboratories.
- PHOS-COPPER**
Westinghouse Electric Corp.
- PHOTACT**
Keuffel & Esser Co.
- PHOTELOMETER**
Central Scientific Co.
- PHOTO-ARC**
Peerless Photo Products
- PHOTOLUX**
Westinghouse Electric Corp.
- PHOTOPHONE**
Radio Corporation of America
- PHOTO-TROLLER**
Westinghouse Electric Corp.
- PHOTOTRON**
Thomas Electronics, Inc.
- PHOTOTRONIC**
Weston Electrical Instruments Corp.
- PHOTOX**
Westinghouse Electric Corp.
- PHOTRONIC**
Weston Electrical Instruments Co.
- PICOPACK**
Telegraph Condenser Co., Ltd.
- PIC-SYNC**
Fairchild Recording Equipment Co.
- PICTURE-PERFECT**
Louis Bros.
- PIEZO-RAY**
Commercial Research Labs., Inc.
- PILOTONE**
Pilot Radio Corp.
- PILOTROL**
Bailey Meter Co.
- PILOTSTAT**
Minneapolis-Honeywell Regulator Co.
- PILOTUNER**
Pilot Radio Corp.
- PINCOR**
Pioneer Gen-E-Motor Corporation
- PINHEAD**
Sprague Electric Co.
- PIN-POINTER**
Radio Merchandise Sales, Inc.
- PIONEER**
Bendix Aviation Corp.
- PISTOGRIP**
Wail Mfg. Co.
- PIX-EYE**
Radio Merchandise Sales, Inc.
- P-K**
Parker Kalon Corp.
- PL**
Penta Laboratories, Inc.
- PLASCAP**
Mallory & Co., Inc., P. R.
- PLASCENE**
Chester Cable Corp.
- PLASKON**
Libbey-Owens-Ford Glass Co.
- PLAST-ALLOY**
Plastic Metals Div.
National Radiator Co.
- PLAST-CORIRON**
Plastic Metals Division
The National Radiator Co.
- PLASTACELE**
du Pont de Nemours & Co., Inc., E. I.
- PLASTAPACK**
Telegraph Condenser Co., Ltd.
- PLASTICON**
Condenser Products Co.
- PLASTICON**
Plastic Wire & Cable Corp.
- PLASTICORD**
Chester Cable Corp.
- PLASTICORE**
Chester Cable Corp.
- PLASTICOTE**
Chester Cable Corp.
- PLASTIFLEX**
Calresin Corp.
- PLASTI-GRIP**
Aircraft-Marline Products, Inc.
- PLASTIK-707**
United Technical Laboratories
- PLASTILOKT**
Precision Paper Tube Co.
- PLAST-IRON**
Plastics Metals Division
National Radiator Co., The
- PLASTISEL**
Electronics Devices, Inc.,
Precision Rectifier Div.
- PLASTITE**
Whitney Blake Co.
- PLAST-MAGNETITE**
Plastics Metals Division
National Radiator Co., The
- PLAST-MANGANESE**
Plastics Metals Division
National Radiator Co., The
- PLAST-NICKEL**
Plastics Metals Division
National Radiator Co., The
- PLASTOK**
Richardson Co., The
- PLASTO-PAK**
Standard-Toch Chemicals, Inc.
- PLASTRONICS**
Maico Co., Inc.
- PLAST-SILICON**
Plastics Metals Division
National Radiator Co., The

AST-SPONGE
 Plastics Metals Division
 National Radiator Co., The
AST-STEEL
 Plastics Metals Division
 National Radiator Co., The
ASTURBO
 Master Appliance Mfg. Co.
LATE-LOK
 Boots Aircraft Nut Co.
LATO
 Raytheon Mfg. Co.
LAXPAK
 Plax Corp.
LAYAL
 Sonotone Corp.
LAYBACK
 Reeves Soundcraft Corp.
LAYBOY
 Carboneau Industries, Inc.
LAYSALL
 Carboneau Industries, Inc.
LENTI-POWER
 Westinghouse Electric Corp.
LEXICON
 Erie Resistor Corp.
LIABOOK
 Paisley Products, Inc.
LIASTIC
 Paisley Products, Inc.
LIATAS
 Paisley Products, Inc.
LILOBOND
 Goodyear Tire & Rubber Co.
LILOGRIP
 Goodyear Tire & Rubber Co.
LIOLITE
 Goodyear Tire & Rubber Co.
LIOTHERM
 Goodyear Tire & Rubber Co.
LIO-TUF
 Goodyear Tire & Rubber Co.
LIOVIC
 Goodyear Tire & Rubber Co.
LUG-IN
 JFD Mfg. Co., Inc.
LUG-STAT
 Control Products, Inc.
LUS SOUND
 Pentron Corp., Inc.
LYACIEN
 Reichhold Chemicals, Inc.
LYAMINE
 Reichhold Chemicals, Inc.
LYMOUTH
 International Television Corp.
LYMOUTH
 Meck TV, Inc.
LYOPHEN
 Reichhold Chemicals, Inc.
LYPAK
 Hinde & Dauch
LY
 Brush Electronics Co.
LYR
 Rockbestos Products Corp.
LYROCKETSCOPE
 Waterman Products Co., Inc.
LYRODROMETER
 Branson Instruments, Inc.
LYROINTARC
 Western Union Telegraph Co.
LYROPOLAROID
 Pioneer Scientific Corp.
LYROPOLATENNA
 Capehart-Farnsworth Corp.
LYROPOLATRON
 Capehart-Farnsworth Corp.
LYROPELECTRON
 General Dyestuff Corp.
LYROPOLICARB
 Driver Co., Wilbur B.
LYROPOLICALARM
 Radio Apparatus Corp.
LYROPOLIMERATOR
 Short Wave Plastic Forming Co.
LYROPOLINEAR RECORDER
 Sound Apparatus Co.
LYROPOLYCO
 Polymer Corp., The
LYROPOLYFLEX
 Plax Corp.
LYROPOLYMER
 Sylvania Electric Products, Inc.
LYROPOLY-PEDANCE
 Standard Transformer Corp.
LYROPOLYPENCO
 Polymer Corp., The
LYROPOLYRANGER
 Sensitive Research Instrument Corp.
LYROPOLYTHENE
 du Pont de Nemours & Co., Inc., E. I.
LYROPOLYTHERM
 Dielectric Materials Co.
LYROPOLY-VISO
 Sanborn Co.
LYROPOLYWELD
 American Phenolic Corp.
LYROPOLYZOL
 Aircraft-Marine Products, Inc.
LYROP
 United Shoe Machinery Corp.
LYROPORTA-FLEXER
 Miskella Infra-Red Co.
LYROPORTA-PHONE
 Feiler Engineering Co.

PORTAPOWERR
 Cornell-Dubilier Electric Corp.
PORTAPOWERR
 Electronic Labs., Inc.
PORTA-POWER
 General Transformer Corp.
PORTENTIOTROL
 Wheelco Instruments Div., Barber-Colman Co.
PORT-O-REEL
 Industrial Electrical Works
PORT PILOT
 Bludworth Marine Div.,
 National-Simplex-Bludworth, Inc.
PORTRAYA
 Haloid Co., The
PORTRONIC
 Photographic Products, Inc.
POST-LITE
 Littelfuse, Inc.
POSTLITE
 Drake Mfg. Co.
POTENTIALS
 Wheelco Instruments Div., Barber-Colman Co.
POWDERMET
 Powdered Metal Products Corp.
POWER BOOSTER
 McColpin-Christie Corp.
POWEREEL
 Industrial Electrical Works
POWERFAC
 Schweitzer, Inc., Peter J.
POWER-FLEX
 Dumore Co., The
POWERSEL
 Electronic Devices, Inc.,
 Precision Rectifier Div.
POWERSPAN
 Videon Electronic Corp.
POWERSTAT
 Superior Electric Co.
POWER STREAK
 American Electric Cable Co.
POWRMIKE
 University Loudspeakers, Inc.
POWR-RIB
 Ohmite Mfg. Co.
POWR-PAKT
 Alliance Mfg. Co.
PPG
 Pittsburgh Plate Glass Co.
P.R.C.
 Precision Resistor Co.
PRD
 Polytechnic Research & Development Co., Inc.
PRECEPTRON
 Sonotone Corp.
PRECIPITRON
 Westinghouse Electric Corp.
PRECISIONER
 Maico Co., Inc.
PRECISION-GAUGED
 Precision Products Co.
PREDICO
 Beam Instruments Corp.
PRESWOOD
 Masonite Corp.
PRE-FAB
 Collins Audio Products Co.
PREGWOOD
 Formica Co.
PREMAX
 Chisholm-Ryder Co., Inc.
PREMIER-TONE
 Premier Metal Etching Co.
PRESET
 Bristol Co., The
PRESS-FIT
 Sealectro Corp.
PRESSITE
 West Virginia Pulp & Paper Co.
PRESSMASTER
 Heiland Research Corp.
PRESSOVAC
 Central Scientific Co.
PRESSTOP
 Brinnell Co., The
PRES-SURE
 Buchanan Electrical Products Corp.
PRESSUREGRAPH
 Electro Products Labs., Inc.
PRES-SURE-SPLICE
 Buchanan Electrical Products Corp.
PRES-SURE-TOOL
 Buchanan Electrical Products Co.
PRESSURETROL
 Minneapolis-Honeywell Regulator Co.
PRESTEEL
 Worcester Pressed Steel Co.
PRESTITE
 Westinghouse Electric Corp.
PREST-O-LITE
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
PREST-O-WELD
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
PRESTROL
 Gerett Corp., M. A.
PRINTMASTER
 Ozalid Div.,
 General Aniline & Film Corp.

PRINTOHHM
 Sprague Electric Co.
PRIVATE EYE
 Television Utilities Corp.
PRIVATE TUTOR
 Eldico of New York, Inc.
PRMCO
 Ports Mfg. Co.
PRODAG
 Acheson Colloids Co.
PRODELIN
 Product Development Co., Inc.
PRODUCTIMETERS
 Durant Manufacturing Co.
PROFESSIONAL
 Decimeter, Inc.
PROFESSIONAL JR.
 Camera Equipment Co.
PROGAR
 Langevin Mfg. Co.
PROKAR
 Sprague Electric Co.
PROMATIC
 General Control Company
PROMCO
 Progressive Mfg. Co.
PROPELLAIR
 Robbins & Myers, Inc.
PROTECTOGL
 Minneapolis-Honeywell Regulator Co.
PROTECTORELAY
 Minneapolis-Honeywell Regulator Co.
PROTECTRON
 Brinnell Company, The
PROTELAGRAM
 North American Philips Co., Inc.
PROTRON
 Professional Electronics Co.
PROVAC
 Electronic Designs, Inc.
PRYSTAL
 Catalin Corp. of America
P. S.
 Motorola, Inc.
PTF
 Minnesota Mining & Mfg. Co.
PUEBLO
 Sangamo Electric Co.
PULSESCOPE
 Waterman Products Co., Inc.
PURATONE
 Brach Mfg. Corp.
PUREBON
 Pure Carbon Co.
PURETONE
 Sonotone Corp.
PURIFIL
 Electric Eye Equipment Co.
PUROX
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
PUSHNUTS
 Palnut Co., Inc.
PUSH-PULL
 James Vibrapowr Co.
PWC
 Plastic Wire & Cable Corp.
PYGMY
 Vulcan Electric Co.
PYRALIN
 du Pont de Nemours & Co., Inc., E. I.
PYRANOL
 General Electric Co.
PYRA SHELL
 Auburn Button Works, Inc.
PYRASHELL
 Shoe Form Co., Inc.
PYREX
 Corning Glass Works
PYROCON
 Illinois Testing Labs., Inc.
PYROHM
 Aerovox Corp.
PYROLANCE
 Illinois Testing Labs., Inc.
PYROMASTER
 Bristol Co., The
PYROMIC
 Telegraph Construction & Maintenance Co., Ltd.
PYROTETER
 Electro-Tech Equipment Co.
PYROTROL
 Bristol Co., The
PYROTROL
 Bailey Meter Co.
PYROVAC
 Eitel-McCullough, Inc.
PYROVISOR
 Bristol Co., The

Q-LACE
 Guthman Inc., Edwln I.
Q-MAX
 Communication Products Co., Inc.
Q METER
 Boonton Radio Corp.
QM 136
 Barrett Varnish Co.
QIKLUG
 Burndy Engineering Co., Inc.
QIKTAP
 Burndy Engineering Co., Inc.
Q. U. A. O.
 Beam Instruments Corp.

QUAD-EX
 Telrex Inc.
QUADREX
 Westinghouse Electric Corp.
QUADRILINE
 Radio Engineering Labs., Inc.
QUADROCONDEX
 Westinghouse Electric Corp.
QUANTOMETERS
 Applied Research Laboratories
QUARTZ Q
 Millen Mfg. Co., James
QUELARC
 Pyle-National Co.
QUICKLAG
 Westinghouse Electric Corp.
QUICK-LOCK
 Simmons Fastener Corp.
QUICK-PIVOT
 JFD Mfg. Co., Inc.
QUIETONE
 Cornell-Dubilier Electric Corp.
QUIK-CALL
 Motorola, Inc.
QUIK-CONNECT
 Aircraft-Marine Products, Inc.
QUIK-LABEL
 Brady Co., W. H.
QUIK-MASKS
 Brady Co., W. H.
QUIK-RIG
 JFD Mfg. Co., Inc.
QUIK-SHOT
 Kemode Mfg. Co., Inc.
QUIK-SIGN
 Brady Co., W. H.
QUINORGO
 Johns-Manville.
QUINORGOBORD
 Johns-Manville
QUINTERRA
 Johns-Manville.
QUINTERRABOARD
 Johns-Manville
QUINTETTE
 Radio Merchandise Sales, Inc.
QX CHECKER
 Boonton Radio Corp.

"R" MONEL
 International Nickel Co., Inc., The.
RdF STIKON
 Ruge-De Forest, Inc.
RACON BROADBAND
 Racon Electric Co.
RADACOL
 Magnetic Core Corp.
RAD-A-COR
 Magnetic Core Corp.
RADA-PULSER
 Kay Electric Co.
RADAIR
 Bassett Inc., Rex.
RADALARM
 Communications Co., Inc.
RADAMETER
 Raytheon Mfg. Co.
RADARANGE
 Raytheon Mfg. Co.
RADAX
 Electro-Voice, Inc.
RADECTOR
 Jordan Electronic Mfg. Co., Inc.
RADELIN
 U. S. Radium Corp.
RADEX
 Boston Insulated Wire & Cable Co.
RADIAC
 Arnold Ceramics, Inc.
RADI-AIRE
 Reynolds Electric Co.
RADIMAX
 Nuclear Research & Development, Inc.
RADIOCARB A
 Driver Co., Wilbur B.
RADIOEAR
 Myers & Sons, E. A.
RADIOFOCAL
 Lord Mfg. Co.
RADIO INDUCTOGRAPH
 Inductograph Lab.
RADIOHH
 Driver-Harris Co.
RADIOHH
 Centralab Div. of
 Globe-Union, Inc.
RADIOLA
 Radio Corp. of America.
RADIOMARINE
 Radio Corp. of America.
RADIOMETAL
 Telegraph Construction & Maintenance Co., Ltd.
RADIOPAK
 Kaar Engineering Co.
RADIO-PILOT
 Fisher Research Lab.
RADIOSURG
 Electronic Surgical Equipment Co., Inc.
RADIOSURG SCALPEL
 Coles Corp.
RADIOTECHNIC
 Peirce Wire Recorder Corp.
RADIOTHERM
 Westinghouse Electric Corp.
RADIOTOME
 Coles Corp.

- RADIOTRON**
Radio Corp. of America.
- RAKSCOPE**
Waterman Products Co., Inc.
- RANGE LUGS**
Frankel Connector Co.
- RANGER**
JFD Mfg. Co., Inc.
- RANGER**
Sorensen & Co., Inc.
- RANGER**
Westinghouse Electric Corp.
- RANGERECD**
Rangertone, Inc.
- RANGEREORDER**
Rangertone, Inc.
- RANGESPLICES**
Frankel Connector Co.
- RANGETAPS**
Frankel Connector Co.
- RATOSIGHTS**
Fisher & Porter Co.
- RATOSLEEVEES**
Fisher & Porter Co.
- RATOTRONIC**
Fisher & Porter Co.
- RAUTOMATIC**
American Scientific Co.
- RAYBOULD**
Scovill Manufacturing Co.
- RAYCHRONIX**
Radioactive Products, Inc.
- RAYCHRONOMETER**
Radioactive Products, Inc.
- RAY-DEC**
Flader, Inc., Fredric
- RAYDIST**
Hastings Instrument Co.
- RAY-DYNE**
White Rock Mfg. Corp.
- RAYFUSER**
Radioactive Products, Inc.
- RAYMERSION**
Trumbull Dept. of General Electric Co.
- RAYOFLEX**
Schott Co., Walter L.
- RAYONIC**
Waterman Products Co., Inc.
- RAYOTUBE**
Leeds & Northrup Co.
- RAYPHOTO**
Times Facsimile Corp.
- RAYSONDE**
Friez Instrument Div.,
Bendix Aviation Corp.
- RAYTHERM**
Raytheon Mfg. Co.
- RAYTRAN**
Raypar, Inc.
- RAY-X**
Raytheon Mfg. Co.
- R B & W**
Russell, Burdsall &
Ward Bolt and Nut Co.
- R/C**
Radio Condenser Co.
- RCA**
Radio Corp. of America
- RCA VICTOR**
Radio Corp. of America
- RdF STIKON**
Ruge-De Forest, Inc.
- REAC**
Reeves Instrument Corp.
- REACTRON**
United Condenser Corp.
- REBEL**
Klipsch & Associates
- RECARB-X**
U. S. Graphite Co.
Div. of The Wickes Corp.
- RECEPTRON**
Howard Mfg. Corp.
- RE-CIRK-IT**
Heinemann Electric Co.
- RECTALIST**
Rek-O-Kut Co. Inc.
- RECO**
Rectifier Engineering Co.
- RECO**
Reynolds Electric Co.
- RECORDALL**
Miles Reproducer Co., Inc.
- RECORDIO**
Wilcox-Gay Corp.
- RECORDION**
Wilcox-Gay Corp.
- RECORDIPOINT**
Wilcox-Gay Corp.
- RECORDISES**
Recordisc Corp.
- RECORD-LIFE**
Minnesota Electronics Corp.
- RECORDO**
Wilcox-Gay Corp.
- RE-CORD-O-FONE**
Bell Sound Systems, Inc.
- RECORDOMATIC TITRATOR**
Precision Scientific Co.
- RECTICHARGER**
Raytheon Mfg. Co.
- RECTIFILTER**
Raytheon Mfg. Co.
- RECTIGON**
Westinghouse Electric Corp.
- RECTIGRAPH**
Haloid Co., The
- RECTI-RINGER**
Raytheon Mfg. Co.
- RECTISEL**
Electronic Devices, Inc.,
Precision Rectifier Div.
- RECTODYNE**
McColpin-Christie Corp.
- RECTOMATIC**
Westinghouse Electric Corp.
- RECTOPLATER**
Mallory & Co., Inc., P. R.
- RECTOPOWER**
Mallory & Co., Inc., P. R.
- RECTOSTARTER**
McColpin-Christie Corp.
- RECTOSTARTER**
Mallory & Co., Inc., P. R.
- RECTOTRUCK**
Mallory & Co., Inc., P. R.
- RECTOX**
Westinghouse Electric Corp.
- RED BALL**
Columbia Reslators, Inc.
- REDFLASH**
Vaco Products Co.
- RED HEAD**
Girdler Corp.
- REDIFON**
Beam Instruments Corp.
- REDI-RIG**
Radio Merchandise Sales, Inc.
- RED LETTER**
Ruby Chemical Co.
- RED SEAL**
Radiart Corp.
- RED SEAL**
Radio Corporation of America
- REDSKIN**
Sangamo Electric Co.
- REDUX**
Ciba Company, Inc.
- REEDEER**
Reeder Co., Charles M.
- REEVELEC**
Reeve Electronics, Inc.
- REFLECTAR**
Back Video Corp., F. G.
- REFLECTOGAGE**
Sperry Products, Inc.
- REFLECTOSCOPE**
Sperry Products, Inc.
- REFRACTALOY**
Westinghouse Electric Corp.
- REFRASIL**
Thompson Co., H. L.
- REGENCY**
I.D.E.A.
- REGENT**
Duo-tone Co., Inc.
- REGOHM**
Electric Regulator Corp.
- REGULITE**
Ward Leonard Electric Co.
- REJAFIX**
Popper & Sons, Inc.
- REKORDER**
Gorrell & Gorrell
- REL**
Radio Engineering Labs., Inc.
- RELATROL**
Automatic Temperature Control Co.
- RELAYMATIC**
Kellogg Switchboard & Supply Co.
- RELIATRON**
Westinghouse Electric Corp.
- RELIO**
U. S. Rubber Co.
- REMACO**
Clarkstan Corp.
- REIMALLOY**
Arnold Engineering Co.
- REMOTE-O-CABLE**
JFD Mfg. Co., Inc.
- REN**
Nebel Lab., R. E.
- REPEATER**
Kemlite Labs.
- RESTIGUM**
Paisley Products Inc.
- RESIMENE**
Monsanto Chemical Co.
- RESIN-FIVE**
Kester Solder Co.
- RESINITE**
Precision Paper Tube Co.
- RESINITE**
Resin Industries
- RESINOX**
Monsanto Chemical Co.
- RESI-RAP**
Paisley Products Inc.
- RESISTOL**
Collyer Insulated Wire Co.
- RETTAX**
Roanwell Corp.
- REVODEX**
Van Dyke Instruments, Inc.
- REVOLUTE**
Paragon-Revolute Corp.
- REVOLUTE COMET**
Paragon-Revolute Corp.
- REVOLUTE ROCKET**
Paragon-Revolute Corp.
- REX**
Crucible Steel Co. of America
- REX**
Shure Brothers, Inc.
- REXLACE**
Rex Corp.
- REXOLITE**
Rex Corp.
- REXTRUDE**
Rex Corp.
- REXVANE**
Westinghouse Electric Corp.
- REX-WELD**
Flexonics Corp.
- REZISTAL**
Crucible Steel Co. of America
- RHEOTROL**
Wheelco Instruments Div., Barber-Col-
man Co.
- RHINOBESTOS**
Westinghouse Electric Corp.
- RHOMAX**
Magnetic Metals Co.
- RHOMETAL**
Telegraph Construction &
Maintenance Co., Ltd.
- RHOMU**
Magnetic Metals Co.
- RHYTHMASTER**
Rek-O-Kut Co. Inc.
- RIBBON HEAT**
Cox & Co., Inc.
- RIBFLEX**
Ward Leonard Electric Co.
- RICHELAIN**
Richardson Co., The
- RIGIDFRAME**
Delco Appliance Div.,
General Motors Corp.
- R. I. P.**
Westinghouse Electric Corp.
- RITEOHM**
Ohmite Mfg. Co.
- RK**
Raytheon Mfg. Co.
- R-M**
Raybestos-Manhattan, Inc.
- R & M**
Robbins & Myers, Inc.
- R M B**
Landis & Gyr, Inc.
- RMC**
Radio Materials Corp.
- R. M. C.**
Radio Music Corp.
- RME**
Radio Mfg. Engineers, Inc.
- RMS**
Radio Merchandise Sales, Inc.
- ROBOLITES**
Universal Microphone Co.
- ROBOMATIC REFRACTOMETER**
Precision Scientific Co.
- ROBOTROL**
Reliance Automatic Lighting Co.
- ROCKET**
Olympic Radio & Television Co.
- ROCKLOID**
Standard-Toch Chemical, Inc.
- RODAR**
Driver Co., Wilbur B.
- ROEBX**
Roebbling's Sons Co., John A.
- ROECLAD**
Roebbling's Sons Co., John A.
- ROEGLAS**
Roebbling's Sons Co., John A.
- ROEPLASTIC**
Roebbling's Sons Co., John A.
- ROEPRENE**
Roebbling's Sons Co., John A.
- ROGER**
Roanwell Corp.
- ROLLCO**
Rollins Co.
- ROLLPINS**
Elastic Stop Nut Corp.
- ROL-TOP**
Boots Aircraft Nut Corp.
- ROSSLYN METAL**
American Cladmetals Co.
- ROTABRAKE**
Lear, Inc.
- ROTA-DAPTER**
Easy-Up Tower Co.
- ROTALYZER**
Kay Electric Co.
- ROTA-TOWER**
Easy-Up Tower Co.
- ROTO-BEAM**
Gordon Specialties Co.
- ROTO BEAM**
Kings Electronics Co.
- ROTOBRIDGE**
Communication Measurements Lab., Inc.
- ROTO-COUNT**
Automatic Temperature Control Co., Inc.
- ROTO-DISPLAY KING**
Gale Dorothea Mechanisms
- ROTO FORMER**
Westinghouse Electric Corp.
- ROTO-LOCK**
Simmons Fastener Corp.
- ROTOMASTER**
Master Appliance Mfg. Co.
- ROTOMATIC**
Johnson Co., E. F.
- ROTOMOUNT**
Premax Products Div.
Chisholm-Ryder, Inc.
- ROTORAC**
Airborne Accessories, Inc.
- ROTO RANGER**
Simpson Electric Co. Div.,
American Gage & Machine Co.
- ROTOSTEPPER**
Giannini & Co., Inc., G. M.
- ROTOTROL**
Westinghouse Electric Corp.
- ROTO-VISION**
Illinois Wood Products Corp.
- RO-TRAN**
Rome Cable Corp.
- ROYAL**
General Lead Batteries Co.
- ROYAL**
Permoflux Corp.
- ROYAL**
U. S. Rubber Co.
- ROYAL II**
Electro-Voice, Inc.
- ROYAL CORD**
U. S. Rubber Co.
- ROYAL GOLD**
U. S. Rubber Co.
- ROYAL JEWEL**
Jensen Industries, Inc.
- ROYAL MASTER**
U. S. Rubber Co.
- ROYALITE**
U. S. Rubber Co.
- R P C**
Resistance Products Co.
- R S M C**
Radio Specialty Mfg. Co.
- R T L**
Peirce Wire Recorder Corp.
- RUBCORD**
U. S. Rubber Co.
- RUB-EROK**
Richardson Co., The
- RUBSEC**
U. S. Rubber Co.
- RUB-TEX**
Richardson Co., The
- RUBYFLUID**
Ruby Chemical Co.
- RUCCO**
Ruby Chemical Co.
- RUF KOAT**
General Cement Mfg. Co.
- RULAN**
du Pont de Demours & Co., Inc., E. I.
- RUSH**
Eraser Co., Inc.
- RUST-BAN**
Esso Standard Oil Co.
- R V**
Clarkstan Corp.
- RX**
Raytheon Mfg. Co.
- RX METER**
Boonton Radio Corp.
- RYCOM**
Railway Communications, Inc.
- RYERTEX**
Ryerson & Son, Inc., Joseph T.
- SAFE-T-GLOW**
Brach Mfg. Corp.
- SAFE-T-KLIP**
Industrial Devices, Inc.
- SAFE-T-PLUG**
Industrial Devices, Inc.
- SAFE-T-PLUG**
Littelfuse Inc.
- SAFE-T-SPARKY**
Littelfuse Inc.
- SAFETY MARGIN**
Astron Corp.
- SAFE TV GUARD**
JFD Mfg. Co., Inc.
- SAFE-T-VOICE**
Z & W Machine Products, Inc.
- SAFLEX**
Monsanto Chemical Co.
- SAL BRICK**
American Solder & Flux Co.
- SALESOMATIC**
West Coast Electronics Co.
- SANACOUSTIC**
Johns-Manville Corp.
- SAND-MEX**
U. S. Graphite Co. Div. of
The Wickes Corp.
- SANDSTEEL**
Sandvik Steel, Inc.
- SANFORD-BENNET**
Rubicon Co.
- SANITEX**
Daniels, Inc., C. R.
- SARAN**
Dow Chemical Co.
- SAUTER**
Cramer Co., Inc., R. W.
- SAV-A-SHAFT**
National Union Radio Corp.
- SAVOY**
Camburn, Inc.
- S/B**
Vaco Products Co.
- SCAICO**
Cooper Co., Clark
- SCALE-O-MATIC**
Technical Associates

SCANOGRAPH
Nuclear Research & Development, Inc.

SCHEMCK
Ferner Co., R. Y.

SCINFLEX
Scintilla Magneto Div., Bendix Aviation Corp.

SCINTILLATOR
Precision Radiation Instruments Inc.

SCINTILOALIZER
R-C Scientific Instrument Co., Inc.

SCINTIMETER
R-C Scientific Instrument Co., Inc.

SCINTIMONITOR
R-C Scientific Instrument Co., Inc.

SCINTISCALER
R-C Scientific Instrument Co., Inc.

SCINTISCANNER
R-C Scientific Instrument Co., Inc.

SCINTISCOPE
R-C Scientific Instrument Co., Inc.

SCINTISTAND
R-C Scientific Instrument Co., Inc.

SCMATCO
Stone City Machine & Tool Co.

SCOUT
Sangamo Electric Co.

SCPULUG
Burndy Engineering Co., Inc.

SCRIBE
Permoflux Corp.

SCOTCH
Minnesota Mining & Mfg. Co.

SCOTTIE
Remler Co., Ltd.

SEAL SILICATE
Philadelphia Quartz Co.

SEALDOHM
Daven Co.

SEALEX
General Ceramics & Steatite Corp.

SEALNUT
Radio Frequency Labs., Inc.

SEAL-O-FLANGE
Communication Prods. Co., Inc.

SEALSTIX
Central Scientific Co.

SELECT-A-CALL
National Inter-Communication Systems, Inc.

SELECTO-CALL
Federal Telephone & Radio Corp.

SELECT-O-PHONE
Kallong Switchboard & Supply Co.

SELECTOVISION
Communication Measurements Lab. Inc.

SELECTRO-PLATERS
Green Electric Co., Inc.

SELETRON
Radio Receptor Co.

SELF CHECKING
Sensitive Research Instrument Corp.

SELF LUBE
Keystone Carbon Co., Inc.

SELF-INSTAL
Audicraft, Inc.

SELKAR
Sprague Electric Co.

SEL-REX
Bart-Messing Corp.

SEMCO
Southwest Engineering & Mfg. Co.

SEMINOLE
Sangamo Electric Co.

SEMS
Lamson & Sessions Co.

SENECA
Sangamo Electric Co.

SENNTRONIC
Senn Corp.

SENSATHERM
Mercoind Corp.

SENSICOM
Motorola Inc.

SENSITROL
Weston Electrical Instruments Corp.

SENSITRON
Weston Electrical Instruments Corp.

SEN TER CEL
Standard Telephones & Cables, Ltd.

SENTINEL
Johnson-Williams, Ltd.

SENTINEL
Photobell Company

SENTINEL
Westinghouse Electric Corp.

SEPIATONE
Frederick Post Co.

SERCO
Stockman Electronics Research Co.

SERRASOID
Radio Engineering Labs., Inc.

SERVATRON
Raytheon Mfg. Co.

SERVICE-MIKE
Cornell-Dubilier Electric Corp.

SERVIT
Burndy Engineering Co., Inc.

SERVE-A-UNIT
Alden Products Co.

SERVOBOARD
Servo Corp. of America

SERVOFLIGHT
Servo Corp. of America

SERVOGRAPH
Fielden Electronics Inc.

SERVOGRAPH
Servo-Tek Products Co.

SERVOSCOPE
Servo Corp. of America

SERVOSPEED
Electro Devices, Inc.

SERVOSYNC
Servo Corp. of America

SERVOSYNTH
Servo Corp. of America

SERVOTHERM
Servo Corp. of America

SERVOTRON
Raytheon Mfg. Co.

SERV-RITE
Gordon Co., Claud S.

SESCO
Sessions Clock Co.

SETKO
Set Screw & Mfg. Co.

SEVEN LEAGUES AHEAD
Thermador Electric Mfg. Co.

SHADOWCONTROL
Autotron Co., The

SHADOWCOUNT
Autotron Co., The

SHADOWMASTER
Autotron Co., The

SHAKEPROOF
Illinois Tool Works

SHAWNEE
Sangamo Electric Co.

SHELDON
Allied Electric Products, Inc.

SHELDON
Jackson Industries, Inc.

SHELDON-MASTER
Sheldon Electric Co. Div., Allied Electric Products, Inc.

SHIELD BRAND
Mitchell-Rand Insulation Co., Inc.

SHOCKPROOF
Industrial Transformer Co.

SHOK-LOK
Automatic Electric Sales Corp.

SHUFFL-LOK
Cascade Television Co.

SHUFFLE SCORE
Cascade Television Co.

SHURFLO
Anchor Metal Co.

SHUR GRIP
Parker-Kalon Corp.

SHURE-STAKE
Thomas & Betts Co.

SHURITE
J B T Instruments Inc.

SICO
Superior Instrument Co.

SIE
Southwestern Industrial Electronics Co.

S. I. E. C.
Sherman Industrial Electronics Co.

SIGHT METER
Weston Electrical Instrument Co.

SIGNALINER
Feiler Engineering Co.

SIGNA-MATCHER
Centralab Div. of Globe Union, Inc.

SILANEAL
Dow Corning Corp.

SILBESTOS
Electro-Technical Products Div. of Sun Chemical Corp.

SILASTIC
Dow Corning Corp.

SILCAZ
Electro Metallurgical Co. Unit of Union Carbide & Carbon Corp.

SILETRON
Arnold Engineering Co.

SILENTBLOC
General Tire & Rubber Co., The

SILENT SENTINEL
Westinghouse Electric Corp.

SILICOHM
Dale Products, Inc.

SILIC-O-NETIC
Heinemann Electric Co.

SILFLEX
Varflex Corp.

SIL-FOS
Handy & Harman

SILKENITE
Acme Wire Co.

SIL-THIN-BESTOS
Electro-Technical Products Div. of Sun Chemical Corp.

SIL-THIN-GLASS
Electro-Technical Products Div. of Sun Chemical Corp.

SILVALOY
American Platinum Works

SILVALOY
Linde Air Products Co. Unit of Union Carbide & Carbon Corp.

SILVERCEL
Yardney Electric Corp.

SILVERCOTE
Little Falls Alloys, Inc.

SILVER LINE
Speedway Mfg. Co.

SILVERLINE
General Instrument Corp.

SILVERMIKE
Condenser Corp. of America

SILVER-Q
Decimeter, Inc.

SILVERSTAT
Westinghouse Electric Corp.

SIMPAC
Westinghouse Electric Corp.

SIMPLI-FLEX
Radlart Corp., The

SIMPLYTROL
Assembly Products, Inc.

SINCOMAX
Murex, Ltd.

SIUOX
Sangamo Electric Co.

SIXTY
Shure Brothers.

SKAN
G-M Laboratories

SKL
Spencer-Kennedy Labs., Inc. S. K. S.

SKYFOUR
Paisley Products, Inc.

SKYFOUR
Hallcrafters Co.

SKYGUIDE
Philco Corp.

SKY-KING
J. F. D. Mfg. Co., Inc.

SKYPLY
Skydyne, Inc.

SKY-STREAK
JFD Mfg. Co., Inc.

SKY-TOP
JFD Mfg. Co., Inc.

SKY-WEIGHT
Continental Electronics, Ltd.

SLIDEOHM
Aerovox Corp.

SLIMAIR
Electro-Voice, Inc.

SLIM-TRIM
Electro-Voice, Inc.

SLIPSTICK
Decimeter, Inc.

SLIPSYN
Westinghouse Electric Corp.

SLO-BLO
Littelfuse, Inc.

SMC
St. Marys Carbon Co.

S-M UNITS
Gorrell & Gorrell

SMALL UNIDYNE
Shure Brothers, Inc.

SMITH-NATHANIEL BALDWIN
Consolidated Radio Products Co.

SMOKGAGE
Ess Specialty Corp.

SMUTBATH
Special Chemicals Co.

SMZ
Electro Metallurgical Co. Unit of Union Carbide & Carbon Corp.

SNAPIT
Cable Electric Products Co.

SNAP-LOCK
National Acme Co.

SNIFFER
Nuclear Instrument & Chemical Corp.

SNIPPER
Johnson-Williams, Ltd.

SNOOPER
Precision Radiation Instruments, Inc.

SNUPEC
Centralab Div. of Globe Union, Inc.

SODEREZE
Phelps Dodge Copper Products Co.

SOLAVOLT
Sola Electric Co.

SOLDALLOY
Mallory & Co., Inc., P. R.

SOLDERALL
Brach Mfg. Corp.

SOLDERFORMS
Kester Solder Co.

SOLDER MASTER
Hexacon Electric Co.

SOLDERLITE
Weller Mfg. Co.

SOLDERSEAL
General Ceramics & Steatite Corp.

SOLISTRAND
Aircraft-Marine Products Inc.

SOLITAIRE
Videon Electronic Corp

SOLOTRON
Modern Hearing Aids Laboratories, The.

SOL-REX
Herzog Miniature Lamp Works, Inc.

SOLU-BRIDGE
Industrial Instruments, Inc.

SONACTOR
Kay Electric Co.

SONA-GRAPH
Kay Electric Co.

SONALATOR
Kay Electric Co.

SONARMETER
Raytheon Mfg. Co.

SONISCAN
Television Equipment Corp.

SONIZON
Magnaflux Corp.

SONOCLE
Sonotone Corp.

SONODYNE
Shure Brothers, Inc.

SONOGEN
Branson Instruments, Inc.

SONO-PROBE
Aircraft Electronics Associates, Inc.

SONOTONOR
Sonotone Corp.

SONOWEAR
Sonotone Corp.

SOUND CELL
Brush Electronics Co.

SOUNDCRAFT
Reeves Soundcraft Corp.

SOUND ISOLATION BLANKET
Johns-Manville Corp.

SOUNDMIRROR
Brush Electronics Co.

SOUNDREEL
Simpson Mfg. Co., Inc., Mark.

SOUNDTRAP
Miles Reproducer Co., Inc.

SOUNDVIEW
Tech-Master Products Co.

SOUND-ZORBER
Finn & Co., Inc., T. R.

SOUTHCAST
Minnesota Mining & Mfg. Co.

SOUTHCO
South Chester Corp.

SPARKFLASH
Triumph Mfg. Co.

SPAULDITE
Spaulding Fibre Co., Inc.

SPAULDO
Spaulding Fibre Co., Inc.

SPEAK-E-Z
Airlectron, Inc.

SPECIAL SERIES
United Transformer Co.

SPECO
Pfanstiehl Chemical Co.

SPECO
Special Products Co.

SPECORAK
Special Chemicals Co.

SPECPLATER
Special Chemicals Co.

SPEC-POWER
National Spectrographic Labs., Inc.

SPECTABLE
Special Chemicals Co.

SPECTAPHONE
Sonotone Corp.

SPECTRIFIER
Special Chemicals Co.

SPECTROPHOTOMETER
Central Scientific Co.

SPEECHMASTER
Jensen Mfg. Co.

SPEED
Speedway Mfg. Co.

SPEED CLAMPS
Tinnerman Products Inc.

SPEED CLIPS
Tinnerman Products Inc.

SPEE-DEE
Peck & Harvey

SPEE-DEE
Radiart Corp.

SPEDEX
General Cement Mfg. Co.

SPEED GRIPS
Tinnerman Products, Inc.

SPEED IRON
Weller Mfg. Co.

SPEED NUTS
Tinnerman Products Inc.

SPEEDOMAX
Leeds & Northrup Co.

SPEEDSORT
Associated Research, Inc.

SPEED TOOLS
Speedway Mfg. Co.

SPEED-X
Johnson Co., E. F.

SPEEDY-MARK
Rocket Distributors, Inc.

SPEEDY-MARK
North Shore Nameplate Co.

SPEKALUMINITE
Special Chemicals Co.

SPEKLEEN
Special Chemicals Co.

SPEKWITE
Special Chemicals Co.

SPEKYELLO
Special Chemicals Co.

SPENCER
American Optical Co.

SPERRY DUPLEX
Sperry Gyroscope Co. Div. of The Sperry Corp.

SPERRY REFLECTOGAGE
Sperry Products, Inc.

SPERRY REFLECTSCOPE
Sperry Products, Inc.

SPHEREX
Electro-Voice, Inc.

SPICO
Spirling Products Co.

SPIN-HEX
Vaco Products Co.

SPINLAB
Special Instruments Laboratory, Inc.

SPIN-LOCK
Russell, Burdsall & Ward Bolt & Nut Co.

SPINTITE
Stevens-Walden Inc.

SPIRALENE
Surprenant Mfg. Co.

- SPIRALOCK**
Product Engineering Co.
- SPIRALON**
Surprenant Mfg. Co.
- SPIRALPOT**
Giannini & Co., Inc., G. M.
- SPIRAL TUBING**
Continental-Diamond Fibre Co.
- SPIRAMEG**
Sprague Electric Co.
- SPIRASHIELD**
Muter Co.
- SPLICE CAP**
Buchanan Electrical Products Corp.
- SPONGEX**
Sponge Rubber Products Co., Inc.
- SPOT-O-GRAPH**
Audio-Master Corp.
- SPRACO**
Sprague Electric Co.
- SPRAY**
Paisley Products Inc.
- SPRING-ACTION**
Sheldon Electric Co.
Div. of Allied Electric Products, Inc.
- SPRING-KING**
Gorrell & Gorrell
- SPRING-LIFE**
Cook Electric Co.
- SPRING-LOCK**
Simmons Fastener Corp.
- SPRING-O-MATIC**
Industrial Electrical Works
- SQUEEZE-LOCK**
Buchanan Electrical Products Corp.
- S.R.C.**
British Radio Electronics Ltd.
- SRHT**
Boston Insulated Wire & Cable Co.
- STABIFLO**
Foxboro Co.
- STABILINE**
Superior Electric Co.
- STABIOLOG**
Foxboro Co.
- STABIOVOLT**
Marconi Wireless Telegraph Co., Ltd.
- STABLOHMS**
Chase Resistor Co.
- STACO**
Standard Electrical Products Co.
- STA-KON**
Thomas & Betts Co.
- STANCOR**
Standard Transformer Corp.
- STANDARD**
New York Solder Co.
- STANDARD**
Shura Bros., Inc.
- STANDARD ARROW**
Bludworth Marine Div.,
National-Simplex-Bludworth, Inc.
- STANDARD BINNACLE**
Bludworth Marine Div.,
National-Simplex-Bludworth, Inc.
- STANDARD SIX**
Bludworth Marine Div.,
National-Simplex-Bludworth, Inc.
- STANDATROL**
Bailey Meter Co.
- STANDCO**
Sticht Co., Inc., Herman H.
- STANDEE**
Clarostat Mfg. Co., Inc.
- STANDLAC**
Standard-Toch Chemicals, Inc.
- STANELCO**
Standard Telephones & Cables Ltd.
- STAN-GARD**
JFD Mfg. Co., Inc.
- STANTEL**
Standard Telephones & Cables Ltd.
- STANTOX**
Standard-Toch Chemicals, Inc.
- STAN-TRAN**
Stanwyck Winding Co.
- STAR**
Duotone Co., Inc.
- STAR J**
Haynes Stellite Co.
Unit of Union Carbide & Carbon Corp.
- STATI-CLEAN**
Electrovox Co., Inc.
- STATIFLUX**
Maanafux Corp.
- STATOMIC**
Motorola Inc.
- STA-TRAN**
Stanwyck Winding Co.
- STEEL-SET**
Paisley Products, Inc.
- STEMAG**
Arnhold Ceramics, Inc.
- STEMCO**
Stevens Mfg. Co., Inc.
- STENAFAX**
Times Facsimile Corp.
- STENO**
Crescent Industries, Inc.
- STENOVOX**
Berlant Associates
- STERILAIRE**
Ultra-Violet Products Inc.
- STERILAMP**
Westinghouse Electric Corp.
- STERILZONE**
Dallons Labs.
- STERLING CABLES**
Beam Instruments Corp.
- STERLINE**
Cossor (Canada) Ltd.
- STERLING CABLES**
Cossor (Canada) Ltd.
- STETHERTRON**
Maico Co., Inc.
- STETHOSCOPE**
Feiler Engineering Co.
- STEWVOX**
Berlant Associates
- STILBEST**
Linick Chemical Co.
- STIMSONITE**
A'G'A' Division of Elastic Stop Nut
Corp. of America
- STOKATIMER**
Mercoid Corp.
- STONEHART**
Titeflex, Inc.
- STRAIN ANALYZER**
Brush Electronics Co.
- STRAINALYZER**
Electronic Tube Corp.
- STRATE-LINE**
Radiart Corp.
- STRATOGRAPH**
Panoramic Radio Products, Inc.
- STRATOLLNET**
Shure Brothers
- STRATOPAX**
Cook Electric Co.
- STRATOSCOPE**
Panoramic Radio Products, Inc.
- STRATOVISION**
Westinghouse Electric Corp.
- STREAMLINER**
Ozalid Div.
General Aniline & Film Corp.
- STRESSCOAT**
Magnafux Corp.
- STRING-A-LITE**
Joy Mfg. Co.
- STIP-O-MATIC**
Viewlex, Inc.
- STRIPMASTER**
Ideal Industries, Inc.
- STRIPOHM**
Ward Leonard Electric Co.
- STRIPSOL**
Paisley Products, Inc.
- STROBOCONN**
Conn. Ltd., C. G.
- STROBODYNE**
Sperry Gyroscope Co. Div of
The Sperry Corp.
- STROBOFLASH**
General Radio Co.
- STROBOLUX**
General Radio Co.
- STROBONAR**
Heiland Research Corp.
- STROBOTAC**
General Radio Co.
- STROWDER**
Automatic Electric Co.
- STRUX**
du Pont de Nemours & Co., Inc., E. I.
- STUPALITH**
Stupakoff Ceramic & Mfg. Co.
- STURTEVANT**
Westinghouse Electric Corp.
- STYCAST**
Emerson & Cuming, Inc.
- STYRACON**
Sprague Electric Co.
- STYRALOY**
Dow Chemical Co.
- STYRAMIC**
Monsanto Chemical Co.
- STYROFLEX**
Phelps Dodge Copper Products Co.
- STYROFOAM**
Dow Chemical Co.
- STYRON**
Dow Chemical Co.
- SUB-CYCLE**
Lorain Products Corp.
- SUBOWNER**
United Transformer Co.
- SUB SUBOWNER**
United Transformer Co.
- SUNFLASH**
Kemlite Labs.
- SUNSWITCH**
Ribley Co., Inc.
- SUPER AUTOBOOSTER**
Industrial Television, Inc.
- SUPER B**
Ozalid Div.,
General Aniline & Film Corp.
- SUPER-BEAM**
JFD Mfg. Co., Inc.
- SUPER DAVOHM**
Daven Co.
- SUPER EX.**
Telrex Inc.
- SUPERFLAKE**
Superior Flake Graphite Co.
- SUPERIOR**
Radiart Corp.
- SUPERIOR**
Wall Mfg. Co.
- SUPERMALLOY**
Arnold Engineering Co.
- SUPER PRO**
Hammarlund Mfg. Co.
- SUPER Q**
Guthman, Inc., Edwin I.
- SUPERSEC**
U. S. Rubber Co.
- SUPER SONIC**
Sonic Industries, Inc.
- SUPERSONIC**
Dzus Fastener Co., Inc.
- SUPERSONIC REFLECTOSCOPE**
Sperry Products Inc.
- SUPER-STRUCTURE**
Radiart Corp.
- SUPER TRACER**
Precision Electronics
- SUPER TROL**
Control Corp.
- SUPERVAC**
Central Scientific Co.
- SUPERVIEW**
Brach Mfg. Corp.
- SUPER-VISION**
Davis Electronics
- SUPERWIRE**
Audar Inc.
- SUPER-X**
Camburn, Inc.
- SUPER-X**
Telrex, Inc.
- SUPER VEE**
Radiart Corp., The
- SUPREME**
Grant Pulley & Hardware Co.
- SUPRO**
Valco Mfg. Co.
- SURCO**
Surprenant Mfg. Co.
- SURFLENE**
Surprenant Mfg. Co.
- SURFLON**
Surprenant Mfg. Co.
- SURE FLUX**
New York Solder Co.
- SURFACE-ANALYZER**
Brush Electronics Co.
- SURFLEX**
Surprenant Mfg. Co.
- SURGYTHERM, JR.**
Wappler, Inc.
- SWEATLESS**
Paisley Products Inc.
- SWEEPMASTER**
Manufacturers Engineering & Equip-
ment Co.
- SWEET**
Jensen Industries, Inc.
- SWELTERPROOF**
Roanwell Corp.
- SWING-WA**
Trumbull Dept. of General Electric Co.
- SWITCH-LITE**
Littelfuse, Inc.
- SWITCH-O-LITE**
Hoffman Engineering Corp.
- SYLPHON**
Fulton Syphon Div.,
Robertshaw-Fulton Controls Co.
- SYLVALOY**
Driver Co., Wilbur B.
- SYMPHONY MASTER**
Monitor Products Co.
- SYNCHRO-METER**
Bailey Meter Co.
- SYNCHRO-SPECIAL**
Heiland Research Corp.
- SYNCHRO-TIMER**
Pratt & Whitney Div. Niles-Bement-
Pond Co.
- SYNCHRON**
Hansen Mfg. Co., Inc.
- SYNCHRO TROL**
Westinghouse Electric Corp.
- SYNCHRO-VALVE**
Bristol Co., The
- SYNCHROVERTER**
Bristol Co., The
- SYNCHROGEARS**
U. S. Electrical Motors, Inc.
- SYNCROLL**
Fairchild Recording Equipment Co.
- SYNCR0-MARKER**
Electro Products Labs.
- SYNCR0MOUNT**
Giannini & Co., Inc., G. M.
- SYNCR0PLEX**
Television Equipment Corp.
- SYNCR0PRINTER**
Anelex Corporation
- SYNCHRO-TUNER**
Short Wave Plastic Forming Co.
- SYNCHRO-TUNER**
Woodwelding, Inc.
- SYNCR0GEN**
Amplitronix Inc.
- SYNCTRON**
Dormitzer Electric Co., Inc.
- SYNKOTE**
Plastoid Corp.
- SYNRUB**
U. S. Rubber Co.
- SYNTHINOL**
Rome Cable Corp.
- SYNTHOGRAPHIC**
Synthane Corp.
- SYNTHOLVAR**
Varflex Corp.
- SYROCOWOOD**
Syracuse Ornamental Co., Inc.
- 260
Simpson Electric Co. Div., American
Gage & Machine Co.
- 357
Teleradio Engineering Corp.
- T-K
Tuttle & Kift
- TABBY
Division Lead Co.
- TACO
Technical Appliance Corp.
- TACOPLEX
Technical Appliance Corp.
- TAG
Weston Electrical Instruments Corp.
- TAKK-TRON
Takk Corp.
- TANGLEPROOF
Hobbs Mfg. Co.
- TANNOY
Beam Instruments Corp.
- TANTALEX
Sprague Electric Co.
- TAP
Continental Screw Co.
- TAP-LOK
Groov-Pin Corp.
- TAPE-O-GRAPH
Audio Industries
- TAPE RECORDER
Ampex Electric Corp.
- TAPER-TONE
Acton Co., H. W.
- TAPE TITE
Paisley Products Inc.
- TAPMASTER
Sheldon Electric Co.,
Div. of Allied Electric Products, Inc.
- TARRYTRON
Cook Electric Co.
- TATTELITE
Littelfuse, Inc.
- T.C.C.
Telegraph Condenser Co., Ltd.
- TEC
Television Equipment Corp.
- TECHNILOG
University Loudspeakers, Inc.
- TECO
Teleradio Engineering Corp.
- TEFLEX
Boston Insulated Wire & Cable Co.
- TEFLON
du Pont de Nemours & Co., Inc., E. I.
- TEFSILON
Boston Insulated Wire & Cable Co.
- T.E.I.
Thomas Electronics, Inc.
- TEKTOLOG
Fielden Instrument Div., Robertshaw-
Fulton Controls Co.
- TEKTOR
Fielden Instrument Div., Robertshaw-
Fulton Controls Co.
- TELACOL
Magnetic Core Corp.
- TEL-A-COR
Magnetic Core Corp.
- TELAMP
Miles Reproducer Co., Inc.
- TELCO
General Cement Mfg. Co.
- TELCOARC
Western Union Telegraph Co.
- TELCOHESIVE
Telegraph Construction &
Maintenance Co., Ltd.
- TELECOMPOUND
Telegraph Construction &
Maintenance Co., Ltd.
- TELCON
Telegraph Construction &
Maintenance Co., Ltd.
- TELCONAX
Telegraph Construction &
Maintenance Co., Ltd.
- TELCONITE
Telegraph Construction &
Maintenance Co., Ltd.
- TELCONNECTORS
Telegraph Construction &
Maintenance Co., Ltd.
- TELCONSTAN
Telegraph Construction &
Maintenance Co., Ltd.
- TELCOSEAL
Telegraph Construction &
Maintenance Co., Ltd.
- TELCOTHENE
Telegraph Construction &
Maintenance Co., Ltd.
- TELCOVIN
Telegraph Construction &
Maintenance Co., Ltd.
- TELCUMAN
Telegraph Construction &
Maintenance Co., Ltd.
- TELE-ATTEN
Vidair Electronics Mfg. Co.
- TELEBOOSTER
Television Equipment Corp.

TELECAP Sprague Electric Co.
TELECOMMAND Flader, Inc., Fredric
TELECORD Whitney Blake Co.
TELECODER Telecomputing Corp.
TELECORDEX Telecomputing Corp.
TELECOUPLER Television Equipment Corp.
TELE-COUPLER Vidaire Electronics Mfg. Co.
TELECUE Telechrome Inc.
TELEDELTS Western Union Telegraph Co.
TELEDIPHONE Edison, Inc., Thomas A.
TELEDUCT Telecomputing Corp.
TELEDYNE Flader, Inc., Fredric
TELEFAX Western Union Telegraph Co.
TELEFLIGHT Flader, Inc., Fredric
TELEFRAME Whitney Blake Co.
TELEGLAS Pittsburgh Plate Glass Co.
TELEHOME Webster Electric Co.
TELEKRYPTON Western Union Telegraph Co.
TELEMASTER Television Equipment Corp.
TELEMETROSCOPE Tobe Deutschmann Corp.
TELEMIKE Miles Reproducer Co., Inc.
TELEMOBILE Tele-Ex-Pand Products Sales Corp.
TELEPAGE Webster Electric Co.
TELEPHOTO Acme Telectronix Div. of NEA Service, Inc.
TELEPLATE Whitney Blake Co.
TELEPLOTTER Telecomputing Corp.
TELEPRENE Whitney Blake Co.
TELEREADER Telecomputing Corp.
TELEREADEX Telecomputing Corp.
TELE-ROTOR Radiart Corp.
TELESEAL Whitney Blake Co.
TELESET Telex, Inc.
TELESONIC U. S. Television Mfg. Corp.
TELESPATCH Webster Electric Co.
TELESPEAKER Telex, Inc.
TELESYMPHONIC U. S. Television Mfg. Corp.
TELESYN Ford Instrument Div., The Sperry Corp.
TELETALK Webster Electric Co.
TELETHERM Westinghouse Electric Corp.
TELETORQUE Kollsman Instrument Corp.
TELETUNER Mallory & Co., Inc., P. R.
TELEVAC Fredericks Co., Geo. E.
TELEVERTER James Vibrapow Co.
TELE-VIDER Electro-Voice, Inc.
TELEVOICE Edison Inc., Thomas A.
TELEVOLT Sola Electric Co.
TELEVOX Westinghouse Electric Corp.
TEL-OHMIKE Sprague Electric Co.
TELOJECTOR Gray Research & Development Co., Inc.
TELOP Gray Research & Development Co., Inc.
TELSTOR Fielden Instrument Div., Robertshaw-Fulton Controls Co.
TEL-TENNA Television Laboratories, Inc.
TELVAR Audar, Inc.
TEMCO Transmitter Equipment Mfg. Co., Inc.
TEMFLEX Irvington Varnish & Insulator Co.
TEMP COP Micro Switch

TEMPERATURE COMPENSATOR "30" Carpenter Steel Co., The
TEMPROOF Lord Mfg. Co.
TEMSTART Synchro Start Products, Inc.
TENITE Eastman Chemical Products, Inc.
TENITE I Eastman Chemical Products, Inc.
TENITE II Eastman Chemical Products, Inc.
TENNA-CLAMP Mueller Electric Co.
TENNA CLIP Industrial Television, Inc.
TENNA-ROTOR Alliance Mfg. Co.
TENNA-SCOPE Alliance Mfg. Co.
TENNASTUB Crystal Devices Co., Inc.
TENNA-TOP Electro-Voice, Inc.
TENNEYZPHERE Tenney Engineering, Inc.
TENSITE Driver Co., Wilbur B.
TENSOLON Tensolite Insulated Wire Co., Inc.
TENS-O-TROL Dillon & Co., Inc., W. C.
TENSULATED Tensolite Insulated Wire Co., Inc.
TERMALINE Bird Electronic Corp.
TERMEND Buchanan Electrical Products Corp.
TERMIN O SEAL Wolfe Co., Inc., Franklin C.
TERROMETER Engineering Research Corp.
TERVAN Esso Standard Oil Co.
TESCO Eastman Specialty Co.
TESTLITE-FUSPUL Dante Electric Mfg. Co.
TEST-MIKE Cornell-Dubilier Electric Corp.
TEST-O-LITES Brach Mfg. Corp.
TEST-MASTER Precision Apparatus Co., Inc.
TETCO Electric Tachometer Co.
TEXCEL Permacel Tape Corp.
TEXTOLITE General Electric Co.
THELCO Precision Scientific Co.
THERACOUPLER Marconi Instruments Ltd.
THERA-RAY Edin Co., Inc.
THERATHERM Marconi Instruments Ltd.
THERLO Driver-Harrils Co.
THERMALARM Eastern Specialty Co.
THERMALL LaRose & Associates, Inc., W. T.
THERM-A-NEERING Westinghouse Electric Corp.
THERMATRON Radio Receptor Co.
THERMEX Girdler Corp.
THERMOCAP Niagara Electron Laboratories
THERMOCONTAX Rahm Instruments, Inc.
THERMO-COUSTI Thompson Co., H. I.
THERMO-FLEX Short Wave Plastic Forming Co.
THERMO-FLEX Woodwelding, Inc.
THERMO-GRIP Ideal Industries, Inc.
THERMOGUARD Westinghouse Electric Corp.
THERMOHM Leeds & Northrup Co.
THERMO-HUMIDIGRAPH Bristol Co., The
THERMOIL-GRANODINE American Chemical Paint Co.
THERMOLAIN Star Porcelain Co.
THERMO-LO Farrelloy Co.
THERMOMETAL Wilson Co., The, H. A.
THER-MONIC Induction Heating Corp.
THERMOPATCH Cox & Co., Inc.
THERMOPLAX Cutler-Hammer, Inc.
THERMOPRENE Whitney Blake Co.
THERMOSEN Sorensen & Co.
THERMOSHEET Cox & Co., Inc.

THERMO-SNAP Spencer Thermostat Div. Metals & Controls Corp.
THERMOSWITCH Fenwal, Inc.
THERM-OTROLS Wheelco Instruments Div. Barber-Colman Co.
THERMOVERTER Bristol Co., The
THERMOWIRE Cox & Co., Inc.
THERMU-TROL Mu Switch Div., Arco Switch Co.
THESAURUS Radio Corp. of America
THORDARSON Meissner Mfg. Div., Maguire Industries, Inc.
THRED-LOCK Continental Screw Co.
THREDMOUNT National Union Radio Corp.
THREE-PHASE Sciaky Bros., Inc.
THROTTLTROLS Wheelco Instruments Div. Barber-Colman Co.
THRULINE Bird Electronic Corp.
THRURAY Sperry Products, Inc.
THYRITE General Electric Co.
THYR-X Liebel-Flarsheim Co.
TIDLETRIK American Lava Corp.
TI-MATIC Westinghouse Electric Corp.
TIME AID Paragon Electric Co.
TIMEFAX Times Facsimile Corp.
TIME-MASTER Dictaphone Corp.
TIME-O-GRAF Borg Equipment Div., George W. Borg Corp.
TIME-O-LITE Industrial Timer Corp.
TIME-O-SWITCH Minneapolis-Honeywell Regulator Co.
TIM-U-LATOR Gorrell & Gorrell
TINOL American Solder & Flux Co.
TINY-GLOW Industrial Devices, Inc.
TINYMIKE Cornell-Dubilier Electric Corp.
TINY TIM Shure Brothers
TINYTRAN Standard Transformer Corp.
TIOGA Sheldon Electric Co., Div., Allied Electric Products, Inc.
TIPS Electronic Products Co.
TIREX Simplex Wire & Cable Co.
TITAN Sonotone Corp.
TITE-BIND Thomas & Betts Co.
TITEGRIP Dante Electric Mfg. Co.
TITONE Sonotone Corp.
TITRILOG Consolidated Engineering Corp.
TITRIMETER Fisher Scientific Co.
TITROMETER Precision Scientific Co.
T. W. Paisley Products Inc.
TOM THUMB Automatic Radlo Mfg. Co., Inc.
TOMAHAWK Sangamo Electric Co.
TONEPAK Lee Electric Co.
TONG TEST Columbia Electric Mfg. Co.
TONG TEST Martindale Electric Co.
TOP HAT Times Facsimile Corp.
TOP-LAY Metals & Controls Corp., General Plate Div.
TOPHET Driver Mfg. Co., Wilbur B.
TORKOTHERM Tork Clock Co.
TORPOT Electro-Mec Laboratory
TORQUE DRIVE Electro-Voice, Inc.
TORKMASTER Tork Clock Co., Inc.
TORSIOGRAPH Commercial Research Labs., Inc.
TORSIOMETER Commercial Research Labs., Inc.

TOTALUME Unitronics, Inc.
TOUCH-TIMER Kay Electric Co.
TPC-KAHL Sightmaster of California Co.
TR2 ROTOR Radiart Corp.
TRADIO Trad Television Corp.
TRADIOPHONE Trad Television Corp.
TRADIOVISION Trad Television Corp.
TRADITION Staedtler Inc., J. S.
TRADITION-CHROMA Staedtler, Inc., J. S.
TRAFF-O-MATIC Automatic Signal Div., Eastern Industries, Inc.
TRAIL BLAZER Meck TV, Inc.
TRAILBLAZER Sangamo Electric Co.
TRAIN EAR Maico Co., Inc.
TRAN-COR Armco Steel Corp.
TRANCORS Lenkurt Electric Co., Inc.
TRANS-TEL Cabest Engineering & Electronics Co.
TRANSALOID Haloid Co., The
TRANSCENDENT Brociner Electronics Laboratory
TRANSFAX Eastman Kodak Co.
TRANSFILTER Brush Electronics Co.
TRANSFLEX Irvington Varnish & Insulator Co.
TRANSI-MAG Magnetic Amplifiers, Inc.
TRANSIST-EAR Maico Co., Inc.
TRANSITE Johns-Manville Corp.
TRANSISTONE Philco Corp.
TRANSKOTE Pancro Mirrors, Inc.
TRANS-O-METER Westinghouse Electric Corp.
TRANSTAT Standard Electronics Corp.
TRANSVERTER Hertner Electric Co.
TRAV-ELECTRIC Terado Co.
TRAVELLER JFD Mfg. Co., Inc.
TRAVERTONE Armstrong Cork Co.
TRAVIS TAPAK Broadcast Equipment Specialties Corp.
TRELCO Transiron Electronic Corp.
TRENTWELD Crucible Steel Co. of America
TRIANGLE T Amalgamated Electronics
TRIAxIAL Jensen Mfg. Co.
TRI-CORE Alpha Metals, Inc.
TRIFLUX Redmond Co., Inc.
TRIG Rostan Corp.
TRIG-R-HEAT Wall Mfg. Co.
TRI-LOK Boots Aircraft Nut Corp.
TRIM TROL Airborne Accessories, Inc.
TRIMTHERM General Controls Co.
TRI-O-MATIC V-M Corp.
TRIONODE Walkirt Co.
TRI-O-SPEED V-M Corp.
TRIONIC Clarkstan Corp.
TRIPLAX Plax Corp.
TRI-PLEX Jensen Mfg. Co.
TRIPLOC Pyle-National Co.
TRI-SNAP Westinghouse Electric Corp.
TROLLEYPHONE Farmers Engineering & Mfg. Co.
TRONEX Wheaton Co., T. C., Electronic Div.
TRUARC Waldes Kohinor Inc.
TRUCOPYPHOTE General Photo Products Co.
TRUE-BRAND Carbonneau Industries, Inc.
TRU FIDELITY Meissner Mfg. Div., Maguire Industries, Inc.

- TRUFLEX**
 Metals & Controls Corp.,
 General Plate Division
- TRU-FLEX**
 Peerless Photo Products
- TRU-GRAF**
 Peerless Photo Products
- TRULUME**
 Reeves Soundcraft Corp.
- TRU-OHM**
 Model Engrng. & Mfg. Co.
- TRUSCON**
 Republic Steel Corp.
- TRU-SONIC**
 Stephens Mfg. Corp.
- TRU-VAC**
 Continental Electric Co.
- TRYLON**
 Wind Turbine Co.,
 Tower & Antenna Div.
- TUBE-MASTER**
 Precision Apparatus Co., Inc.
- TUBE-U-LAR**
 Pyramid Electric Co.
- TUBE VISE**
 Precision Plastic Products, Inc.
- TUCK-AWAY**
 JFD Mfg. Co., Inc.
- TUFFERNELL**
 Westinghouse Electric Corp.
- TUFFY**
 Insulation Manufacturers Corp.
- TUFLEC**
 Laminated Plastics Inc.
- TUF-ON**
 Brooklyn Paint & Varnish Co., Inc.
- TUNE-O-MATIC**
 Electro-Voice, Inc.
- TURBO**
 Brand & Co., Inc., William
- TURBOGLAS**
 Brand & Co., Inc., William
- TURBOLAC**
 Brand & Co., Inc., William
- TURBOSIL**
 Brand & Co., Inc., William
- TURBO PRENE**
 Brand & Co., Inc., William
- TURBOTHERM**
 Brand & Co., Inc., William
- TURBOTRANS**
 Brand & Co., Inc., William
- TURBOTUF**
 Brand & Co., Inc., William
- TURQUOISE**
 Eagle Pencil Co.
- TWEEZER WELD**
 Federal Tool Engineering Co.
- 23 CLIPPER**
 Centralab Div. of
 Globe-Union, Inc.
- TWIN BLOK**
 United Mfg. & Service Co.
- TWIN FAST**
 Blake & Johnson Co.
- TWINTACTS**
 Weston Electrical Instrument Co.
- TWINTENA**
 Penn Television Products Co.
- TWIN-TRAX**
 Amplifier Corp. of America
- TWINKORD**
 Ansonia Wire & Cable Co.
- TWINSET**
 Telex, Inc.
- TWINSULATION**
 U. S. Rubber Co.
- TWIN-VISO**
 Sanborn Co.
- TWISTAB**
 National Union Radio Corp.
- TWISTAGUIDE**
 Airtron, Inc.
- TWIST-LOCK**
 Harvey Hubbell, Inc.
- TWIST-LOK**
 Sprague Electric Co.
- TWIST-MOUNT**
 Pyramid Electric Co.
- TWIST-TITE**
 Harvey Hubbell, Inc.
- TWOFOLD**
 Mitchell Industries, Inc.
- TWO-TIMER**
 Vocaline Company of America, Inc.
- TY-DOWN**
 Air Associates, Inc.
- TYGON**
 U. S. Stoneware Co.
- TYGORUST**
 U. S. Stoneware Co.
- TYGOTHENE**
 U. S. Stoneware Co.
- TY-LOK**
 Air Associates, Inc.
- TYNISWITCH**
 Sessions Clock Co.
- TYMIT**
 Tork Clock Co.
- TYNEE-DRY**
 Pyramid Electric Co.
- TYPE-O-WRITER**
 Kellogg Switchboard & Supply Co.
- TY-PLY**
 Marbon Corp.
- TZUCOPY PHOTE**
 General Photo Products Co., Inc.
- UASCO**
 Mitchell Industries, Inc.
- UBABOND**
 Union Bay State Chemical Co.
- UBAGRIP**
 Union Bay State Chemical Co.
- UBAPOL**
 Union Bay State Chemical Co.
- UBATEX**
 Union Bay State Chemical Co.
- UCINITE**
 United Carr Fastener Corp.
- U CON**
 Mucon Corp.
- U-GRIP**
 Aircraft-Marine Products, Inc.
- ULTRA**
 Camburn, Inc.
- ULTRABOOSTER**
 Blender-Tongue Laboratories, Inc.
- ULTRA-CAL**
 Cubic Corp.
- ULTRACOMPACT**
 United Transformer Co.
- ULTRA LINEAR**
 Acro Products Co.
- ULTRASCALER**
 Nuclear Instrument & Chemical Corp.
- ULTRASONORATOR**
 Crystal Research Labs., Inc.
- ULTRA-SWEEP**
 Kay Electric Co.
- ULTRATONE**
 Audio Industries Inc.
- ULTRAVERTER**
 Blender-Tongue Laboratories, Inc.
- ULTRA V-BEAM**
 J F D Mfg. Co., Inc.
- ULTRA VISCOSON**
 Rich-Roth Laboratories
- ULTRON**
 Monsanto Chemical Co.
- UMP**
 Illinois Condenser Co.
- UNBRAKO**
 Standard Pressed Steel Co.
- UNDARK**
 U. S. Radium Corp.
- UNIBALLASTS**
 National Union Radio Corp.
- UNI-BRIDGE**
 Industrial Electronics, Inc.
- UNICAST**
 Redmond Co., Inc.
- UNICLOSED**
 U. S. Electrical Motors, Inc.
- UNICON**
 United Condenser Corp.
- UNI-CRIMP**
 Sherman Mfg. Co., H. B.
- UNIDYNE**
 Shure Brothers, Inc.
- UNIFLARE**
 Scovill Mfg. Co.
- UNI-FLEX**
 Dumore Co., The
- UNIELECTRIC**
 United Mfg. & Service Co.
- UNIFLEX**
 Miskella Infra-Red Co.
- UNI-FLO**
 Wheelco Instruments Div., Barber-Colman
 Co.
- UNIFORMITY ANALYZER**
 Brush Electronics Co.
- UNI-MATIC**
 Calbest Engineering & Electronics Co.
- UNIMAX**
 Maxson Corp., W. L.
- UNION**
 National Union Radio Corp.
- UNIONMELT**
 Linde Air Products Co., Unit of
 Union Carbide & Carbon Corp.
- UNIPLEX**
 Battery Division,
 Burgess Battery Co.
- UNIPLEX**
 Shure Brothers, Inc.
- UNIPOINT**
 Shure Brothers, Inc.
- UNIPOLE**
 Andrew Co.
- UNI-SHAFT**
 Mallory & Co., Inc., P. R.
- UNITACT**
 Bristol Co., The
- UNITED**
 Jackson Industries, Inc.
- UNITONE**
 Duotone Co., Inc.
- UNIVERSAL**
 Mueller Electric Co.
- UNIVERSAL**
 Brush Electronics Co.
- UNIVERSAL BRIDGE SWITCH**
 Brush Electronics Co.
- UNIVERSAL MASTER**
 Hovis Screwlock Co.
- UNIVERTER**
 Boonton Radio Corp.
- UNIVIBES**
 National Union Radio Corp.
- UNIVIS**
 Esso Standard Oil Co.
- UNIVOLT**
 Esso Standard Oil Co.
- UNLIMITET**
 Northern-Zaleski, Ltd.
- UPPCO**
 United Pressed Products Co.
- UPSON**
 Republic Steel Corp.
- URAC**
 American Cyanamid Co.
- URELITE**
 I-T-E- Circuit Breaker Co.
- U.S.E.**
 U. S. Electronics Corp.
- USG**
 U. S. Graphite Co. Div. of
 The Wickes Corp.
- UST**
 U. S. Television Mfg. Corp.
- USALITE**
 Stupakoff Ceramic & Mfg. Co.
- USECO**
 U. S. Engineering Co.
- USEMENT**
 U. S. Rubber Co.
- USEX**
 U. S. Rubber Co.
- USEX ABBOSEALED**
 U. S. Rubber Co.
- USKORNA**
 U. S. Rubber Co.
- USPREME**
 U. S. Rubber Co.
- USRUB**
 U. S. Rubber Co.
- USS**
 United States Steel Corp.
- U.S.S. AMERICAN**
 American Steel & Wire Co.
- UTC**
 United Transformer Corp.
- UTE**
 Sangamo Electric Co.
- UTILASTIC**
 Paisley Products, Inc.
- UTILIPHONE**
 National Electronic Labs., Inc.
- UTILISCOPE**
 Diamond Power Specialty Corp.
- UTILITURE**
 Aluminum Co. of America
- U-TONE**
 Utah Radio Products Co., Inc.
- UYCOR**
 Corning Glass Works
- V-HEAT**
 Electric Eye Equipment Co.
- V-KING**
 Schott Co., Walter L.
- VACOMBO**
 Vaco Products Co.
- VAGABOND**
 Shure Brothers, Inc.
- VALVRATORS**
 Fischer & Porter Co.
- VALVSEAL**
 Richardson Co., The
- VAN DE GRAAFF**
 High Voltage Engineering Corp
- VAP0**
 Post Co., Frederick
- VAREC**
 Vapor Recovery Systems Co.
- VARFLO**
 Varflex Corp.
- VARGLAS**
 Varflex Corp.
- VARIAC**
 General Radio Co.
- VARIATEN**
 Shallock Mfg. Co.
- VARICELL**
 Superior Electric Co., The
- VARICON**
 Elco Corp.
- VARIDRIVES**
 U. S. Electrical Motors, Inc.
- VARIETY**
 Electron Enterprises
- VARIFILE**
 Photographic Products, Inc.
- VARI-LOOPSTICK**
 Grayburne Corp.
- VARIMATCH**
 United Transformer Corp.
- VARI PLOTTER**
 Electronic Associates, Inc.
- VARIPOLE**
 Califone Corp.
- VARIPOWER**
 United Transformer Corp.
- VARISPEED**
 Audio-Master Corp.
- VARITONE**
 Flader, Inc., Fredric
- VARITRAN**
 United Transformer Corp.
- VARITRON**
 Photographic Products, Inc.
- VARITRONIC**
 Electrons Equipment Corp.
- VARIETYMER**
 Gale Dorothea Mechanisms
- VARI-VOLT**
 Halldorson Co., The
- VARSLOT**
 New Jersey Wood Finishing Co.
- VASCO**
 Mitchell Industries, Inc.
- VARTEX**
 New Jersey Wood Finishing Co.
- VAW**
 Fluke Engineering Co., John
- VECO**
 Victory Engineering Corp.
- VECTORLYZER**
 Advance Electronics Co.
- VEECO**
 Vacuum Electronic Engineering Co.
- VEE-D-X**
 LaPointe Electronics Inc.
- VEGETOL**
 Cornell-Dubilier Electric Corp.
- VEGIMAL**
 Paisley Products, Inc.
- VELOMETER**
 Illinois Testing Labs, Inc.
- VELOUR-BLACK**
 Sheldon Electric Co. Div of
 Allied Electric Products, Inc.
- VENDLITES**
 Drake Mfg. Co.
- VENTURI-FLO**
 Barber-Colman Co.
- VERICON**
 Remington Rand, Inc.
- VERITHIN**
 Eagle Pencil Co.
- VERNIER-SET**
 Automatic Temperature Control Co., Inc.
- VERSACONE**
 Radio Merchandise Sales
- VERSA-LINER**
 Peck & Harvey
- VERSALITE**
 U. S. Rubber Co.
- VERSATEX**
 Shure Brothers
- VIBESTON**
 U. S. Rubber Co.
- VIBRAGLASS**
 Glass Fibers, Inc.
- VIBRALLOY**
 Arnold Engineering Co.
- VIBRALYZER**
 Kay Electric Co.
- VIBRAPAK**
 Mallory & Co., Inc., P. R.
- VIBRASENDER**
 Motorola Inc.
- VIBRA-SHOCK**
 Robinson Aviation, Inc.
- VIBRASPOUNDER**
 Motorola Inc.
- VIBRATAB**
 Telecomputing Corp.
- VIBROGROUND**
 Associated Research Inc.
- VIBROMETER**
 Televiso Products, Inc.
- VIBROMIKE**
 Brush Electronics Co.
- VIBROTEST**
 Associated Research, Inc.
- VICALLOY**
 Arnold Engineering Co.
- VICTOR**
 Radio Corp. of America
- VICTROLA**
 Radio Corp. of America
- VICTRON**
 Victor Electric Products, Inc
- VIDEO BEAM**
 Camburn, Inc.
- VIDEO DESIGNS**
 Yonkers Industries
- VIDEOCOUPLER**
 Mallory & Co., Inc., P. R.
- VIDEOFILM**
 General Precision Laboratory, Inc.
- VIDEOGAM**
 General Precision Laboratory, Inc.
- VIDEOLA**
 Tech-Master Products Co.
- VIDEO LUX**
 Video Corp. of America
- VIDEOMETER**
 Hirsch Electrical Instrument Co.
- VIDEOPTICS**
 Burke & James, Inc.
- VIDEASET**
 Video Corp. of America
- VIDEOSTIGMAT**
 Burke & James, Inc.
- VIDEOTRON**
 National Union Radio Corp.
- VIDI MASTER**
 Communication Measurements Lab., Inc.
- VIEWLITE**
 Viewlex Inc.
- VIEWMATIC**
 Viewlex Inc.
- VIEWTALK**
 Viewlex Inc.
- VIKANE**
 Cornell-Dubilier Electric Corp.
- VIKING**
 Jensen Mfg. Co.
- VIKING**
 Johnson Co., E. F.

VIMLITE
 Celanese Corp. of America
VINALAK
 Reichhold Chemicals, Inc.
VINAPEX
 Apex Coated Fabrics Co.
VINYL
 Alpha Wire Corp.
VINYLLITE
 Bakelite Corp. A Div. of Union Carbide
 & Carbon Corp.
VINYLSEAL
 Bakelite Corp. A Div. of Union Carbide
 & Carbon Corp.
VINYON
 Bakelite Corp. A Div. of Union Carbide
 & Carbon Corp.
VIPOWER
 Cornell-Dubilier Electric Corp.
VIPOWER
 Radlart Corp.
VISABLE PROOF
 Electric Heat Control Co., The
VISAFLEAME
 Mercoind Corp.
VIS-A-GLOW
 Brach Mfg. Corp.
VISCONOL
 Telegraph Condenser Co., Ltd.
VISCOR
 Weston Electrical Instruments Co.
VISICODE
 Westinghouse Electric Corp.
VISITRON
 Rauland Corp.
VISO-CARDIETTE
 Sanborn Co.
VITAMIN Q
 Sprague Electric Co.
VITATRON
 Sheldon Electric Co. Div. of
 Allied Electric Products, Inc.
VITAVOX
 Radionic Transformer Co.
VITREOSIL
 Thermal Syndicate, Ltd., The
VITROHM
 Ward Leonard Electric Co
VITROLAIN
 Star Porcelain Co.
VIZ
 Molded Insulation Co.
VOCAL-AIRE
 Dilks Co., The
VOCATRON
 Vocaline Company of America, Inc.,
VOICE OF THEATRE
 Altec Lansing Corp.
VOICEWRITER
 Edison Inc., Thomas A.
VOLOCITROL
 Barber-Colman Co.
VOLOMETER
 Electronic Measurements Corp.
VOLTALAC
 Standard-Toch Chemicals, Inc.
VOLT-AMP
 Industrial Devices, Inc.

VOLTASCOPE
 Polarad Electronics Corp.
VOLTBOX A-C
 Superior Electric Co.
VOLTOHMYST
 Radio Corporation of America
VOLTROL
 Acme Electric Corp.
VOLTRON
 Industrial Synthetics Corp.
VOLTSTAT
 Industrial Transformer Co.
VORCO
 Vorac Co., The
VORLAC
 Vorac Co., The
VUELITE
 Monsanto Chemical Co.
VUEPAK
 Monsanto Chemical Co.
VULCATEX
 Horn Co., Inc., A. C.
VULCOID
 Continental-Diamond Fibre Co.
VYCOR
 Corning Glass Works

WALCO
 Electrovox Co., Inc.
WALDES TRUARC
 Waldes Kohlnoor, Inc.
WALKIE-RECORDALL
 Miles Reproducer Co., Inc.
WALSCO
 Schott Co., Walter L.
WAMCO
 Walnut Machine Co.
WARRIOR
 Sangamo Electric Co.
WASSCO
 Wasserlein Mfg. Co., Inc.
WATCH MASTER
 American Time Products, Inc.
WATERWITE
 Bache & Co., Semon
WATTERSON
 Davls & Co., J. W.
WAVEFLEX
 Titeflex, Inc.
WAX S 1167
 Glyco Products Co., Inc.
W. D. C.
 Paisley Products Inc.
WEAREVER
 Daniels, Inc., C. R.
WBCOR
 Webster-Chicago Corp.
WEDGE-GRIP
 Sherman Mfg. Co., H. B.
WEDGE-ON
 Thomas & Betts Co.
WEDGIE
 Insulation Manufacturers Corp.
WEIGER-WEED
 Fansteel Metallurgical Corp.
WELDRAWN
 Superior Tube Co.
WELDOMATIC
 Westinghouse Electric Corp.

WELD-O-TIMER
 Westinghouse Electric Corp.
WELD-O-TROL
 Westinghouse Electric Corp.
WELDPPOWER
 Raytheon Mfg. Co.
WEMCALLOY
 Westinghouse Electric Corp.
WES CO
 West Coast Electrical Mfg. Corp.
WESGO
 Western Gold & Platinum Works
WESLAB
 Weston Laboratories, Inc.
WESTLINE
 Western Lithograph Co.
WETOIL
 Farrelloy Co.
WHARFEDALE
 British Industries Corp.
WHC
 Waltham Horological Corp.
WHEELLOCK
 Signal Engineering & Mfg. Co.
WHIPPET
 JFD Mfg. Co., Inc.
WINCHESTER
 Olin Industries, Inc.
WILCO
 Wilson Co., The, H. A.
WILCOLEC
 Wilcox Electric Co.
WILKOR
 Aerovox Corp.
WILLIAMSON "HALLMARK"
 British Radio Electronics Ltd.
WINCO
 Hudson Wire Co.
WINCO
 Wincharger Corp.
WIPERMALLOY
 United Transformer Corp.
WIRE-NUT
 Ideal Industries, Inc.
WIRE-OHM
 Phaostron Co.
WIREFHONE
 Molded Insulation Co.
WIRETONE
 Molded Insulation Co.
WIREWATT
 Ohmite Mfg. Co.
WIREWAY
 Land-Air, Inc.
WIRTCO
 Wirt Co.
WONDERFLUX
 American Silver Co., Inc.
WOOD GLU
 Paisley Products Inc.
WOODITE
 Syracuse Ornamental Co., Inc.
WOOD RAY
 Short Wave Plastic Forming Co.
WOOD-RAY
 Woodwelding, Inc.
WOODWELDER
 Short Wave Plastic Forming Co.
WOODWELDER
 Woodwelding, Inc.

WOUNDWOOD
 Southern Industries of Maryland Inc.
WRINLAY
 Photo Chemical Products, Inc.
WYD-ANGLE
 Ess Specialty Corp.

XACTEMP
 Gordon Co., Claud S.
XACTLINE
 Gordon Co., Claud S.
XENOFLASH
 Triumph Mfg. Co.
XEROX
 Haloid Co., The
XPANDIT
 Tele-Ex-Pand Products Sales Corp.
X-PRESS
 Cook Electric Co.
XRD
 X-Ray Dept. of General Electric Co.
XTE
 Irvington Varnish & Insulator Co.
X-VAR
 Fidelity Chemical Products Corp.
X-WASHERS
 Standard Locknut & Lockwashers, Inc.

YANKEE
 Stanley Tools Div., Stanley Works
YARDARM
 Radio Merchandise Sales, Inc.
YES
 Yates Engineering Services
YORKMESH
 York Co., Inc., Otto H.

Z ANGLE
 Technology Instrument Corp.
ZAHODIAKIN
 Scovill Mfg. Co.
ZENEL
 Bonney Forge & Tool Works
ZENO-KOTE
 Zenith Optical Lab.
ZERO READER
 Sperry Gyroscope Co. Div.
 of The Sperry Corp.
ZIPCORD
 U. S. Rubber Co.
ZIP-GRIP
 Set Screw & Mfg. Co.
ZIP-IN
 American Phenolic Corp.
ZIPOHMS
 Muter Co.
ZIPPER
 Centralab Div. of Globe-Union, Inc.
ZIRMET
 Foote Mineral Co.
ZOOMAR
 Television Zoomar Corp.
ZOOM UP
 Camburn, Inc.
ZOOM-UP
 JFD Mfg. Co., Inc.
ZYGLO
 Magnaflux Corp.
ZYROX
 Bakelite Co. A Div. of Union Carbide
 & Carbon Corp.

1953-1954 ELECTRONICS BUYERS' GUIDE

MANUFACTURERS INDEX

A listing of the companies engaged in the manufacture of all types of electronic components and complete electronic equipment. They are alphabetically arranged for convenient use and quick reference.

- A B C Radio Laboratories, 3334 N. New Jersey St., Indianapolis 5, Ind.
- A. C. Transformer Corp., 89 Madison St., Newark, N. J.
- 'G/A' Div. of Elastic Stop Nut Corp. of America, 1029 Newark Ave., Elizabeth 3, N. J.
- A J F Industries, Inc., 852 Monroe St., Brooklyn 21, N. Y.
- A. P. W. Co., 72 W. Main St., Rockaway, N. J.
- A. R. F. Products, Inc., 7627 Lake St., River Forest, Ill.
- Abalon Precision Mfg. Corp., 540 Casanova St., Bronx 59, N. Y.
- Accurate Electronics Corp., 1312 Ontario St., Cleveland 13, Ohio.
- Accurate Insulated Wire Corp., 25 Fox St., New Haven, Conn.
- Accurate Mfg. Co., 44 Hepworth Place, Garfield, N. J.
- Accurate Paper Tube Co., 801 N. Peoria St., Chicago 22, Ill.
- Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
- Ace Coil & Electronics Co., 914 Middlesex Ave., Metuchen, N. J.
- Ace Engineering & Machine Co., Inc., 3642 N. Lawrence St., Philadelphia 40, Pa.
- Ace Spring Mfg. Co., 77 W. Houston St., New York 12, N. Y.
- Acheson Colloids Co., 1950 Washington Ave., Port Huron, Mich.
- Ackerman Engravers, 458 Broadway, New York, N. Y.
- Ackerman-Gould Co., 92 Blecker St., New York, N. Y.
- Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago 6, Ill.
- Acme Battery Co., 59 Pearl St., Brooklyn 1, N. Y.
- Acme Electric Corp., 31 Water St., Cuba, N. Y.
- Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
- Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.
- Acme Electronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
- Acme Wire Co., New Haven 14, Conn.
- Acro Mfg. Co., 2040 E. Main St., Columbus 16, Ohio.
- Acro-Mu Switch Div., Acro Mfg. Co., Columbus, Ohio.
- Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
- Acro Transformer Mfg. Corp., 26-02 4th St., Astoria 2, N. Y.
- Acromark Company, The, 9-13 Morrell St., Elizabeth 4, N. J.
- Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y.
- Adams & Westlake Co., Michigan St., Elkhart, Ind.
- Adel Div. of General Metals Corp., 10777 Van Owen St., Burbank, Calif.
- Admiral Corp., 3800 Cortland St., Chicago 47, Ill.
- Advance Electric & Relay Co., 2435 Naomi St., Burbank, Calif.
- Advance Electronics Co., 451 Highland Ave., Passaic, N. J.
- Advance Insulated Wire & Cable Co., Inc., 10 Tingley Lane, Raritown Township, Plainfield, N. J.
- Advance Recording Products Co., 36-12 34th St., Long Island City, N. Y.
- Advanced Electronics, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
- Aeromotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
- Aerocoil Inc., 24 Cliff St., Jersey City, N. J.
- Aerolite Electronics Corp., 507-26th St., Union City, N. J.
- Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
- Aeronautical Electronics Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
- Affiliated Products, Inc., 4802 N. Broad St., Philadelphia 41, Pa.
- Ainslie Electronic Products, Inc., 312 Quincy Ave., Quincy 69, Mass.
- Air Associates, Inc., Teterboro, N. J.
- Air Control Installations, Ltd., Ruislip, Middlesex, England.
- Air-Marine Motors, Inc., 3939 Merrick Rd., Seaford, N. Y.
- Airborne Accessories, Inc., 25 Montgomery St., Hillside 5, N. J.
- Airborne Electronics Co., Metropolitan Airport Hangar No. 6, Van Nuys, Calif.
- Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
- Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
- Aircraft Radio Corp., Boonton, N. J.
- Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.
- Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa.
- Airflyte Electronics Co., 21 Cottage St., Bayonne, N. J.
- Airmec, Ltd., High Wycombe, Buckinghamshire, England.
- Air-Mite, 4417 W. Carroll Ave., Chicago 24, Ill.
- Airpax Products Co., Middle River, Baltimore 20, Maryland.
- Airtron, Inc., 1103 W. Elizabeth Ave., Linden, N. J.
- Airtronics Mfg. Co., 5145 W. San Fernando Rd., Los Angeles 39, Calif.
- Alamo Electronic Corp., 105 Romana St., San Antonio 1, Texas.
- Alcar Instruments, Inc., 20-21 Wagaraw Rd., Fair Lawn, N. J.
- Alco Electronics Mfg. Co., 102 Marston St., Lawrence, Mass.
- Alden Electronic & Impulse Recording Equipment Co., Box 125, Westboro, Mass.
- Alden Products Co., 112 N. Main St., Brockton 64, Mass.
- Alden Systems, Inc., Alden Research Center, Westboro, Mass.
- Alifax Paper & Engineering Co., Washington St., P. O. Box 125, Westboro, Mass.
- All American Tool & Mfg. Co., 8027 Lawndale, Skokie, Ill.
- All Metal Products, 206 McWhorter St., Newark 5, N. J.
- All Star Products, Inc., Defiance, Ohio.
- All-Tronics, Inc., 2 Secatog Ave., Port Washington, N. Y.
- All Weather Springs, 140 Cedar St., New York, N. Y.
- Allegany Instrument Co., Inc., Cumberland, Md.
- Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
- Allen Co., L. B., Inc., 6751 Bryn Mawr Ave., Chicago 31, Ill.
- Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
- Allen Mfg. Co., Hartford 2, Conn.
- Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio.
- Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
- Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
- Allied Industries, Inc., 1023 S. 21st St., Louisville 10, Ky.
- Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
- Allied Radio Corp., 833 W. Jackson Blvd., Chicago 7, Ill.
- Allied Recording Products Co., 32-32 Greenpoint Ave., Long Island City, N. Y.
- Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
- Allis-Chalmers Mfg. Co., 935 South 70th St., Milwaukee 1, Wis.
- Allis Co., Louis, 427 E. Stewart St., Milwaukee 7, Wis.
- Allison Laboratories, 419 Vista Del Llano Drive, Whittier, Calif.
- Allison Radar Corp., 11 W. 42nd St., New York 18, N. Y.
- Allmetal Screw Products Co., Inc., 33 Greene St., New York 13, N. Y.
- Alloy Metal Wire Co., 13th & Penna. Ave., Prospect Park, Pa.
- Alpar Mfg. Co., P. O. Box 152, Redwood City, Calif.
- Alpha Electronics, Inc., Route 17, Ramsey, N. J.
- Alpha Metals, Inc., 60 Water St., Jersey City, N. J.
- Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
- Alproco, Inc., Mineral Wells, Texas.
- Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
- Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
- Aluminum Goods Mfg. Co., Manitowoc, Wis.
- Amalgamated Electronics, Electronics Road, Clinton Corners, N. Y.
- Ambroid Co., 305 Franklin St., Boston 10, Mass.
- American Aluminumware Co., 378 Jelliff Ave., Newark 8, N. J.
- American Brass Co., 414 Meadow St., Waterbury 20, Conn.
- American Chemical Paint Co., Ambler, Pa.
- American Chronoscope Corp., 316 W. First St., Mount Vernon, N. Y.
- American Cladmetals Co., P. O. Box 544, Carnegie, Pa.
- American Condenser Co., 4410 Ravenswood Ave., Chicago 40, Ill.
- American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
- American Diathermy Products, Inc., 11858 Mississippi Ave., Los Angeles 25, Calif.
- American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif.
- American Electrical Heater Co., 6110 Cass Ave., Detroit 2, Mich.
- American Electroneering Co., 2040 Colorado Ave., Santa Monica, Calif.
- American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.
- American Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y.
- American Electronics Corp., 157 Marion Blvd., Columbus, Ohio.
- American Encaustic Tiling Co., Electronic Div., Lansdale, Pa.
- American Gyro Corp., 1509 Colorado Ave., Santa Monica, Calif.
- American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
- American Hinge Corp., 206 Wallabout St., Brooklyn 6, N. Y.
- American Industrial Specialties Co., 1047 E. 76th St., Chicago, Ill.
- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
- American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y.
- American Lava Corp., Chattanooga 5, Tennessee.
- American Leonic Mfg. Co., Amber & Hagert Sts., Philadelphia 25, Pa.
- American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
- American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
- American Molded Products Co., 1644 N. Honore St., Chicago 22, Ill.
- American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
- American Nut & Bolt Fastener Co., 2045 Doerr St., Pittsburgh 33, Pa.
- American Optical Co., Box A, Buffalo 15, N. Y.
- American Phenolic Corporation, 1830 S. 54th Ave., Chicago 50, Ill.
- American Photocopy Equipment Co., 2849 N. Clark St., Chicago, Ill.
- American Platinum Works, N.J.R.R. Ave. at Oliver St., Newark 5, N. J.
- American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
- American Radionic Co., Inc., 33 & 55 Flatbush Ave., Brooklyn, N. Y.
- American Radio Hardware Co., Inc., 152 MacQuesten Pkway., Mount Vernon, N. Y.
- American Relay & Controls Inc., 4901 W. Flournoy St., Chicago 44, Ill.
- American Research Corp., P. O. Box 1121, Bristol, Conn.
- American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
- American Screw Co., Willimantic, Conn.
- American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
- American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.
- American Speedlight Corp., 480 Lexington Ave., New York 17, N. Y.
- American Steel & Wire Div., U. S. Steel Co., Rockefeller Bldg., Cleveland 13, Ohio.
- American Television, Inc., 523 S. Plymouth St., Chicago 6, Ill.
- American Television & Radio Co., 300 E. 4th St., St. Paul 1, Minn.
- American Thermo Electric Co., 198-11 Hollis Ave., Hollis 12, N. Y.
- American Time Products, Inc., 580 Fifth Ave., New York 36, N. Y.
- Amersil Co., Inc., Hillside, N. J.
- Anglo Corp., 2037 W. Division St., Chicago 22, Ill.
- Amperex Electronic Corp., 230 Duffy Ave., Hicksville, N. Y.
- Amperite Co., 561 Broadway, New York 12, N. Y.
- Amplex Electric Corp., 934 Charter St., Redwood City, Calif.
- Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
- Amplitronix Inc., 280 Ninth Ave., New York 1, N. Y.
- Ampro Corp., 2835 North Western Ave., Chicago 18, Ill.
- Amy, Aceves & King Inc., 11 W. 42nd St., New York 18, N. Y.
- Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
- Analytical Measurements, Inc., 585 Main St., Chatham, N. J.
- Anchor Industrial Co., 36-36 36th St., Long Island City 6, N. Y.
- Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
- Anchor Radio Co., 2215 S. St. Louis Ave., Chicago 23, Ill.
- Anchor Plastics Co., Inc., 36-36 36th St., Long Island City 6, N. Y.
- Anco Wood Specialties, Inc., 71-08 80th St., Brooklyn 27, N. Y.
- Andersen Laboratories, Inc., 39 Talcott Rd., West Hartford, Conn.
- Anderson, Arthur R., 517 North I St., Tacoma 3, Wash.

Anderson & Sons, Inc., Westfield, Mass.
 Andrea Radio Corp., 27-01 Bridge Plaza North, Long Island City 1, N. Y.
 Andrew Corp., 363 E. 75th St., Chicago 19, Ill.
 Analex Corporation, Concord, N. H.
 Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind.
 Ansley Mfg. Co., Arthur, Doylestown, Pa.
 Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.
 Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.
 Anton Electronics Laboratories, Inc., 1226 Flushing Ave., Brooklyn 37, N. Y.
 Apco Mossberg Co., Attleboro, Mass.
 Apex Coated Fabrics Co., 12 E. 22nd St., New York 10, N. Y.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
 Applied Physics Corp., 362 W. Colorado St., Pasadena 1, Calif.
 Appled Research Labs., 4336 San Fernando Rd., Glendale 4, Calif.
 Applied Science Corp. of Princeton, The, P. O. Box 44, Princeton, N. J.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Arch Gear Works, Inc., Quincy, Mass.
 Arco Electronics Inc., 103 Lafayette St., New York 13, N. Y.
 Arco Transformer & Electric Corp., 1602 S. Hanna St., Fort Wayne, Ind.
 Arenberg Ultrasonic Laboratory, 94 Green St., Jamaica Plain 30, Mass.
 Argyle Electronics Co., 8 W. 18th St., New York 11, N. Y.
 Ark-Les Switch Corp., 55 Water St., Watertown 72, Mass.
 Arkwright Finishing Co., Providence, R. I.
 Arma Corp., 254 36th St., Brooklyn 32, N. Y.
 Armo Steel Corp., 703 Curtis St., Middletown, Ohio.
 Armstrong Cork Co., Lancaster, Pa.
 Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
 Arnold Engineering Co., Marengo, Ill.
 Arro Expansion Bolt Co., Boone Ave., Marion, Ohio.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Art-Lloyd Metal Products Corp., 2973 Cropsey Ave., Brooklyn 14, N. Y.
 Art Wire & Stamping Co., 227 High St., Newark 2, N. J.
 Artos Engineering Co., 2737 S. 28th St., Milwaukee, Wis.
 Aruna Brothers, 3 Keeling Rd., New Delhi, India.
 Arvin Industries Inc., Radio & Television Div., Columbus, Ind.
 Arwood Precision Casting Corp., 70 Washington St., Brooklyn, N. Y.
 Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
 Askanla Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Associated Engineering Corp. of Boston, 38 Euston Road, Brighton 35, Mass.
 Associated Engineering & Mfg. Corp., 22 Lawrence St., Newark 5, N. J.
 Associated Industries, 6855 Tujunga Blvd., North Hollywood, Calif.
 Associated Production Co., 162 N. Clinton St., Chicago 6, Ill.
 Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Associated Specialties Co., 1751 Main St., Orefield, Pa.
 Astatic Corporation, The, Conneaut, Ohio.
 Astron Corp., 255 Grant Ave., East Newark, N. J.
 Atlantic India Rubber Works, Inc., Dept. EL, 571 Polk St., Chicago 7, Ill.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Atlantic Research Corp., 808 N. Royal St., Alexandria, Va.
 Atlas Coil Winders, Inc., 39 Manhattan St., Stamford, Conn.
 Atlas E-E Corp., 312 Stuart St., Boston 16, Mass.
 Atlas Engineering Co., 3 Edgewood St., Roxbury, Mass.
 Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
 Atlas Screw & Specialty Co., 450 Broome St., New York 13, N. Y.
 Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
 Atlas Tack Corp., Pleasant St., Fairhaven, Mass.
 Atomic Instrument Co., 84 Massachusetts Ave., Cambridge 39, Mass.
 Auburn Button Works, Inc., Auburn, N. Y.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Audak Co., 500 Fifth Ave., New York, N. Y.
 Audar, Inc., P. O. Box 438M, Pasadena 18, Calif.
 Audicraft, Inc., 77 S. Fifth St., Brooklyn 11, N. Y.
 Audio Development Co., 2833 13th Ave., S., Minneapolis 7, Minn.
 Audio Devices, Inc., 444 Madison Ave., New York 22, N. Y.
 Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
 Audio Equipment Sales, 153 W. 33rd St., New York 1, N. Y.
 Audio Industries, Inc., Michigan City, Ind.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 Audio-Master Corp., 341 Madison Ave., New York 17, N. Y.
 Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.
 Augat Bros., Inc., 33 Perry Ave., Attleboro, Mass.
 Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Auto Engraver Co., Ridgefield, Conn.
 Autocrat Electronics Co., 5024 Elm St., Skokie, Ill.
 Automatic & Precision Mfg. Co., 315 E. 91st St., New York 28, N. Y.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
 Automatic Mfg. Corp., 65 Gouverneur St., Newark 4, N. J.
 Automatic Metal Products Co., 315 Berry St., Brooklyn 11, N. Y.
 Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.
 Automatic Signal Division, Eastern Industries, Inc., 100 Regent St., East Norwalk, Conn.
 Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Autoscrew Co., 216-222 W. 18th Street, New York, N. Y.
 Autotron Co., The, Danville, Ill.
 Aviation Engineering Corp., 34-56 58th St., Woodside 77, N. Y.
 Avon Tube Div., Higbie Mfg. Co., Rochester, Mich.
 Avery Adhesive Label Corp., Monrovia, Calif.
 Avor Corp., 450 Broome St., New York 13, N. Y.
 Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.
 Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.
 B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.
 B & M Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
 B & M Metal Products Corp., 14 Factory St., Cedar Grove, N. J.
 B-T Mfg. Corp., 38 N. Second Ave., Mt. Vernon, N. Y.
 Bace Television Corp., Green & Leuning Sts., South Hackensack, N. J.
 Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
 Back Video Corp., F. G., 500 Fifth Ave., New York, N. Y.
 Baer Co., N. S., 9 Montgomery St., Hillside, N. J.
 Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
 Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 East 42nd St., New York 17, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Baker Chemical Co., J. T., Phillipsburg, N. J.
 Baker Manufacturing Co., Evansville, Wis.
 Baldor Electric Co., 4353 Duncan Ave., St. Louis, Mo.
 Ballantine Laboratories, Inc., Boonton, N. J.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn, N. Y.
 Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Barber-Colman Co., Rockford, Ill.
 Barber Labs., Alfred W., 32-44 Francis Lewis Blvd., Flushing, N. Y.
 Bardwell & McAlister Inc., 2950 Ontario, Burbank, Calif.
 Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.
 Barnes Development Co., Lansdowne, Pa.
 Barnes Metal Products Co., 4425 W. 16th St., Chicago 23, Ill.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Barreca Products Co., Inc., 84 Bowery, New York 13, N. Y.
 Barrett Bindery Co., 1332 W. Monroe St., Chicago 7, Ill.
 Barrett Co., Leon J., P. O. Box 378, Worcester 1, Mass.
 Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.
 Barry Corp., The, 711 Pleasant St., Watertown 72, Mass.
 Barry Electronics Corp., 136 Liberty St., New York 6, N. Y.
 Bart Labs. Co., Inc., 227 Main St., Belleville 9, N. J.
 Bart-Messing Corp., 227 Main St., Belleville 9, N. J.
 Bassett Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
 Beach-Russ Co., 50 Church St., New York 7, N. Y.
 Bead Chain Manufacturing Co., The, 110 Mountain Grove St., Bridgeport 5, Conn.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Beaver Gear Works, Inc., 1034 Parmele St., Rockford, Ill.
 Becker Electronics Mfg. Corp., Horton & Rockaway Aves., Valley Stream, N. Y.
 Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
 Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 Bel Fuse Inc., 311 Mountain Road, Union City, N. J.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
 Beltone Hearing Aid Co., Beltone Bldg., 1450 W. 19th St., Chicago 8, Ill.
 Belvision, Inc., 265 Greenwich St., New York, N. Y.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bendix Aviation Corp., 203 W. Third St., Cincinnati 2, Ohio.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Bennett Co., Inc., R. P., Frederick, Md.
 Bennett Mfg. Co., Alden, N. Y.
 Bentley-Harris Mfg. Co., Conshohocken, Pa.
 Bergen Wire Rope Co., 1-2-3 Gregg St., Lodi, N. J.
 Berkeley Scientific Corp., Richmond, Calif.
 Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass.
 Berlant Associates, 4917 W. Jefferson Blvd., Los Angeles 16, Calif.
 Berndt-Bach, Inc., 7373 Beverly Blvd., Los Angeles 36, Calif.
 Beryllium Corp., The, Reading, Pa.
 Best Manufacturing Co., Inc., 1200 Grove St., Irvington 11, N. J.
 Beta Electric Corp., 333 E. 103rd St., New York 29, N. Y.
 Beva Laboratory, P. O. Box 478, Trenton 9, N. J.
 Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
 Bigelow Mfg. Corp., 225 W. Bigelow St., Newark 8, N. J.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Bird Co., Richard H., 1 Spruce St., Waltham, Mass.
 Bird Electronic Corp., 1800 E. 38th St., Cleveland 14, Ohio.
 Birdsall Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.
 Birklan Corp., 200 E Third St., Mt. Vernon, N. Y.
 Birmingham Sound Reproducers, Ltd., Claremont Works, Old Hill, Staffs, England.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Birtcher Corp., 4371 Valley Blvd., Los Angeles 32, Calif.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
 Biwax Corp., 3445 Howard St., Skokie, Ill.
 Blake & Johnson Co., 1495 Thomaston Ave., Waterville 48, Conn.
 Blaw-Knox Div. of Blaw-Knox Co., Farmers Bank Bldg., Pittsburgh 22, Pa.
 Biley Electric Co., Union Station Bldg., Erie, Pa.
 Bliss Electronic Corp., Box 123, Sussex, N. J.
 Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Board Products Co., 4206 W. Lake St., Chicago 24, Ill.
 Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, Ill.
 Bodnar Industries, Inc., 19 Railroad Ave., New Rochelle, N. Y.
 Boehme Inc., H. O., 915 Broadway, New York 10, N. Y.
 Boeing Airplane Co., Seattle 14, Wash.
 Boesch Mfg. Corp., Danbury, Conn.
 Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Bogue Railway Equipment Div., Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson 3, N. J.
 Bolta Co., Lawrence, Mass.
 Bomac Laboratories, Inc., Salem Rd., Beverly, Mass.
 Bond Electric Corp., Div. of Olin Industries Inc., New Haven 4, Conn.
 Bond Electronics Corp., 60 Springfield Ave., Springfield, N. J.
 Bone Engineering Co., 701 W. Broadway, Glendale 4, Calif.
 Bonney Forge & Tool Works, Allentown, Pa.
 Boonton Radio Corp., Boonton, N. J.
 Booth Co., Arthur E., 265 S. Alexandria Ave., Los Angeles, Calif.
 Boots Aircraft Nut Corp., 55 John St., Stamford, Conn.
 Borg Equipment Division, The George W. Borg Corp., Janesville, Wis.
 Borden Co., The, Chemical Div., 350 Madison Ave., New York 17, N. Y.
 Borthig Co., Inc., George C., P. O. Box 115, East Rutherford, N. J.
 Boston Insulated Wire & Cable Co., 63 Bay St., Boston 25, Mass.
 Boulin Instrument Corp., 65 Madison Ave., New York 16, N. Y.
 Bourns Laboratories, 6135 Magnolia Ave., Riverside, Calif.
 Bowers Battery & Spark Plug Co., Reading, Pa.
 Bowmar Instrument Corp., 2415 Pennsylvania Ave., Fort Wayne, Ind.
 Bowser Technical Refrigeration Div., Bowser, Inc., Terryville, Conn.
 Boyle Metalcraft Corp., 150 Sullivan St., Brooklyn 31, N. Y.
 Bozak Co., R. T., 114 Manhattan St., Stamford, Conn.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 Bracke-Seib X-Ray Co., Inc., 293 Third Ave., New York 10, N. Y.
 Bradley Labs., Inc., 82 Meadow St., New Haven 10, Conn.
 Brady Co., W. H., 727 W. Glendale Ave., Milwaukee 12, Wis.
 Brainin Co., C. S., 320 Washington St., Mt. Vernon, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Brand & Co., Inc., William, North & Valley Sts., Williamstont, Conn.
 Branson Instruments, Inc., 438 Fairfield Ave., Stamford, Conn.
 Braun Tool & Instrument Co., Inc., H., 140 Fifth Ave., Hawthorne, N. J.
 Breeze Corps., Inc., 41 S. Sixth St., Newark 7, N. J.
 Breloco Electronics Corp., 55 Vandam St., New York 13, N. Y.
 Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.
 Brew & Co., Inc., Richard D., 106 Concord Ave., Belmont 78, Mass.
 Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.

Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.

Bright Star Battery Co., 200 Crooks Ave., Clifton, N. J.

Brilhart Plastics Corp., Old Country Rd., Mineola, N. Y.

Brilmayer Labs., Inc., E. W., 86 Fulton St., New York 38, N. Y.

Brinnell Company, The, Simsbury, Conn.

Bristol Brass Co., 580 Broad St., Bristol, Conn.

Bristol Co., The, Waterbury 20, Conn.

Bristol Engineering Corp., Lincoln Ave. & Pond St., Bristol 1, Pa.

Bristol Motor Division, Vocaline Company of America, Inc., Old Saybrook, Conn.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

British Radio Electronics Ltd., 1 Thomas Circle, Washington 5, D. C.

British Industries Corp., 164 Duane St., New York 13, N. Y.

Broadcast Equipment Specialties Corp., 135-01 Liberty Ave., Richmond Hill 19, N. Y.

Brociner Electronics Laboratory, 1546 Second Ave., New York 28, N. Y.

Brook Electronics, Inc., Box 491, Elizabeth, N. J.

Brookhaven Electronics Corp., Box 931, Sanford, N. C.

Brooklyn Paint & Varnish Co., Inc., 50 Jay St., Brooklyn, N. Y.

Brown Electro-Measurement Corp., 4637 SE Hawthorne Blvd., Portland 15, Ore.

Browning Laboratories, Inc., 750 Main St., Winchester, Mass.

Brubaker Mfg. Co., Inc., 1951 Exposition Drive, Los Angeles 34, Calif.

Bruning Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.

Brush Beryllium Co., The, 4301 Perkins Ave., Cleveland 3, Ohio.

Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio.

Buchanan Electrical Products Corp., 223 Route 24, Hillside, N. J.

Buck Engineering Co., 37-41 Marcy St., Freehold, N. J.

Buckeye Bobbin Co., 13337 Madison Ave., Cleveland, Ohio.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.

Buda Co., The, Harvey, Ill.

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.

Buggie & Co., H. H., 726 Stanton St., Toledo, Ohio.

Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.

Bulova Watch Co., Quartz Crystal Div., 630 Fifth Ave., New York 20, N. Y.

Burdick Corp., Milton, Wis.

Burgess Battery Co., Battery Div., Freeport, Ill.

Burke & James Inc., 321 S. Wabash Ave., Chicago 4, Ill.

Burken Lamination Corp., 811 Whittier St., Bronx 59, N. Y.

Burlington Instrument Co., Burlington, Iowa.

Burndy Engineering Co., Inc., Norwalk, Conn.

Burnell & Co., 45 Warburton Ave., Yonkers 2, N. Y.

Burnley Battery & Mfg. Co., Clay St., North East, Pa.

Burroughs Corp., Electronic Instruments Div., 511 N. Broad St., Philadelphia 23, Pa.

Burton Mfg. Co., 11201 W. Pico Blvd., Los Angeles 64, Calif.

Bussman Mfg. Co., St. Louis 7, Mo.

Butler Mfg. Co., Inc., B. B., 3150 Randolph St., Bellwood, Ill.

C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.

C. S. Mfg. Co., 4089 Lincoln Blvd., Venice, Calif.

Cable Electric Products Co., Providence, R. I.

Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.

Cadre Industries Corp., Box 117, 19 Delaware Ave., Endicott, N. Y.

Calbest Engineering & Electronics Co., 628 N. Highland Ave., Hollywood 38, Calif.

Calidyne Co., The, P. O. Box 72, Winchester, Mass.

Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.

Calresin Corp., 333 N. Santa Anita Ave., P. O. Box 945, Arcadia, Calif.

Caltron Co., 1406 So. Hobart Blvd., Los Angeles 6, Calif.

Calvideo Tube Corp., 5232 W. 104th St., Los Angeles 45, Calif.

Camcar Screw & Mfg. Corp., 600 18th Ave., Rockford, Ill.

Cambridge Instrument Co., Inc., 3805 Grand Central Terminal, New York 17, N. Y.

Cambridge Pattern Works, Inc., 55 First St., Cambridge 41, Mass.

Cambridge Thermionic Corp., 445 Concord Ave., Cambridge 38, Mass.

Camburn, Inc., 32-40 57th St., Woodside, N. Y.

Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.

Camloc Fastener Corp., 22 Spring Valley Rd., Paramus, N. J.

Campbell Industries, Inc., St. Elmo Station, Chattanooga 9, Tenn.

Canadian Aviation Electronics, Ltd., 8280 St. Lawrence Blvd., Montreal 14, P. Q., Canada.

Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.

Cannon Co., C. F., Springwater, N. Y.

Cannon Electric Co., 3209 Humboldt St., Los Angeles 31, Calif.

Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.

Capehart-Farnsworth Corp., 3700 E. Pontiac, Fort Wayne 1, Ind.

Capps & Co., Inc., Frank L., 244 W. 49th St., New York 19, N. Y.

Carad Corp., 93 Leland Ave., San Francisco 28, Calif.

Carboly Dept. of General Electric Co., 11139 E. Eight Mile Blvd., Detroit 32, Mich.

Carboneau Industries, Inc., 100 Lexington W., Grand Rapids, Mich.

Cardwell Mfg. Corp., Allen D., 97 Whiting St., Plainville, Conn.

Cargo Packers, Inc., 73 Rutledge St., Brooklyn 11, N. Y.

Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.

Carlson & Nicholson, Inc., 497 Maynard Drive, Buffalo 21, N. Y.

Carol Cable Div. of Crescent Co., Inc., Front & Central Ave., Pawtucket, R. I.

Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.

Carpenter Steel Co., 142 West Bern St., Reading, Pa.

Carpenter Steel Co., Alloy Tube Div., Union, N. J.

Carpenter Steel Co., Webb Wire Div., New Brunswick, N. J.

Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.

Carter Motor Co., 2644 N. Maplewood Ave., Chicago 47, Ill.

Carter Parts Co., 213 Institute Place, Chicago 10, Ill.

Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.

Cast Optics Corp., 1 Post Rd., Riverside, Conn.

Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.

Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.

Celco Constantine Engineering Laboratories Co., Island Ave., Mahwah, N. J.

Cellusuede Products, Inc., Rockford, Ill.

Central Research Laboratories, Inc., Red Wing, Minn.

Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.

Central Screw Co., 3501 Shields Ave., Chicago 9, Ill.

Central Stamping & Mfg. Co., Polo, Ill.

Central Transformer Co., 910 W. Jackson Blvd., Chicago, Ill.

Centralab, Div. of Globe-Union Inc., 914Y E. Keefe Ave., Milwaukee 1, Wis.

Centronics Co., 21-04 122 St., College Point, N. Y.

Century Electric Co., 1806 Pine St., St. Louis 3, Mo.

Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.

Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.

Cerro de Pasco Corp., 40 Wall St., New York 5, N. Y.

Channel Master Co., Ellenville, N. Y.

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

Chase Resistor Co., 9 River St., Morristown, N. J.

Chatham Electronics Corp., Livingston, N. J.

Cherry-Channer Corp., 1488 Skokie Blvd., Highland Park, Ill.

Cherry Rivet Co., A Div. of Townsend Co., 231 Winston Street, Los Angeles 13, Calif.

Chester Cable Corp., Hill St., Chester, N. Y.

Chicago Condenser Corp., 3255 W. Armitage Ave., Chicago 47, Ill.

Chicago Dial Co., 2919 S. La Salle St., Chicago, Ill.

Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.

Chicago Electronic Engineering Co., 3223 W. Armitage Ave., Chicago 47, Ill.

Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill.

Chicago Rivet & Machine Co., Bellwood, Ill.

Chicago Telephone Supply Corp., 1142 W. Beardsley Ave., Elkhart, Ind.

Chicago Tool & Engineering Co., 8380 S. Chicago Ave., Chicago 17, Ill.

Chicago Transformer Div., Essex Wire Corp., 3501 W. Addison St., Chicago 18, Ill.

Churchill Corp., 844 Franklin St., Melrose 76, Mass.

Ciba Co., Inc., 627 Greenwich St., New York 14, N. Y.

Cima Corp., 119 Brintree St., Allston, Mass.

Cinaudagraph Speakers, 7334 N. Clark St., Chicago 26, Ill.

Cinch Mfg. Corp., 1026 S. Homan Ave., Chicago 24, Ill.

Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Circuit Craft Associates, 5827 E. Beverly Blvd., Los Angeles 22, Calif.

Circuitron, Inc., 400 Ninth St., Hoboken, N. J.

Citation Products Co., 233 E. 146th St., New York 51, N. Y.

Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.

Claremont Laboratories, Inc., New Cassel, N. Y.

Clark-Aitken Co., Lee, Mass.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Clark Crystal Co., 2 Farm Rd., Marlboro, Mass.

Clark Electronic Labs., Box 165, Palm Springs, Calif.

Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.

Clarostat Mfg. Co., Inc., Dover, N. H.

Clary Multiplier Corp., San Gabriel, Calif.

Clear Beam Television Antenna Co., 100 Prospect Ave., Burbank, Calif.

Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N. J.

Cleveland Container Co., The, 6201 Barberton Ave., Cleveland 2, Ohio.

Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland, Ohio.

Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio.

Clifford Mfg. Co., Grove St., Waltham, Mass.

Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 14, Ohio.

Clough Brengle Co., 6014 N. Broadway, Chicago, Illinois.

Coast Coil Co., 5332 W. Washington Blvd., Los Angeles 16, Calif.

Coaxial Connector Co., 35 N. Second Ave., Mt. Vernon, N. Y.

Co-Design Corp., 751 Main St., Winchester, Mass.

Codetypewriter Laboratories, 550 Fifth Ave., New York 19, N. Y.

Cohan-Epner Co., Inc., 142 W. 14th St., New York 11, N. Y.

Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Coil Winding Equipment Co., 109 Audrey Ave., Oyster Bay, N. Y.

Coilcraft, Inc., 3716 N. Cicero Ave., Chicago 41, Ill.

Cole Instrument Co., 1320 S. Grand Ave., Dept. A, Los Angeles 15, Calif.

Cole Radio Works, 86 Westville Ave., Caldwell, N. J.

Cole Steel Equipment Co., 285 Madison Ave., New York 17, N. Y.

Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.

Collectron Corp., 216 E. 45th St., New York 17, N. Y.

Collins Audio Products Co., P. O. Box 368, Westfield, N. J.

Collins Radio Co., Cedar Rapids, Iowa.

Colonial Insulator Co., 907 Grant St., Akron 11, Ohio.

Colonial Process Supply Co., 140 W. 23rd St., New York 11, N. Y.

Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.

Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio.

Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.

Columbia Resistors, Inc., 216 Lafayette St., New York 12, N. Y.

Columbia Technical Corp., 5 E. 57th St., New York 22, N. Y.

Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Columbian Carbon Co., Mapico Color Div., 601 Cass St., Trenton, N. J.

Columbian Rope Co., Auburn, N. Y.

Columbus Products Corp., 1010 Saw Mill River Rd., Yonkers, N. Y.

Colvin Laboratories, 12 Court St., Morristown, N. J.

Comar Electric Co., 3349 W. Addison St., Chicago 18, Ill.

Combustion Control Corp., 720 Beacon St., Boston 15, Mass.

Commercial Equipment Co., Inc., Box 168, Lawrence, Kansas.

Commercial Plastics Co., 2822 W. North Ave., Chicago 47, Ill.

Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.

Communication Accessories Co., Box 7, 110th St. & 71 Hiway, Hickman Hills, Mo.

Communication Measurements Lab. Inc., 350 Leland Ave., Plainfield, N. J.

Communication Products Co., Inc., Marlboro, N. J.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

Computer Corp. of America, 149 Church St., New York, N. Y.

Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.

Computing Devices of Canada, Ltd., 338 Queen St., Ottawa 4, Ontario.

Conant Labs., 6500 O St., Lincoln 5, Nebraska.

Condenser Products Co., 7517 N. Clark St., Chicago 26, Ill.

Condor Radio Mfg. Co., 2705 S. Kramer Ave., Tucson, Ariz.

Conn Ltd., C. G., Electronics Div., Elkhart, Ind.

Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.

Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.

Conrac, Inc., Glendora, Calif.

Conrad Industrial Coolers, 53 W. 4th St., Holland, Mich.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.

Consolidated Molded Products Corp., Scranton 2, Pa.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.

Consolidated Vacuum Corp., 735 Ridge Rd. W., Rochester 3, N. Y.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Illinois.

Constantin & Co., L. L., Route No. 6 at Lodi Circle, Lodi, N. J.

Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.

Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio.

Continental Connector Corp., 30-30 Northern Blvd., Long Island City, N. Y.

Continental-Diamond Fibre Co., Newark 100, Delaware.

Continental Electric Co., Geneva, Ill.

Continental Electric Co., Inc., 334 Ferry St., Newark 5, N. J.

Continental Electronics Ltd., 302 Oakland St., Brooklyn 22, N. Y.

Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.

Continental Screw Co., New Bedford, Mass.

Control Corp., 718 Central Ave., Minneapolis 14, Minn.

Control Electronics Co., Inc., 1925 New York Ave., Huntington Station, N. Y.

Control Engineering Corp., 560 Providence Highway, Norwood, Mass.

Control Products, Inc., 306 Sussex St., Harrison, N. J.

Cook Ceramic Mfg. Co., 501 Prospect St., Trenton 1, N. J.

Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7 R. I.

Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.

Cook Laboratories, Inc., R-2, Stamford, Conn.

Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
 Cooper Electronic Products Co., 4500 Melrose St., Philadelphia 24, Pa.
 Copperweld Steel Co., Glassport, Pa.
 Coradio, Inc., 196 Albion Ave., Paterson, N. J.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Cornell Electronics Corp., 40-33 Main Ave., Douglaston, N. Y.
 Corning Glass Works, Corning, N. Y.
 Cornish Wire Co., 50 Church St., New York 7, N. Y.
 Corry-Jamestown Mfg. Co., Corry, Pa.
 Corson Electric Mfg. Corp., 540 39th St., Union City, N. J.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Cosa Corp., 405 Lexington Ave., New York 17, N. Y.
 Cosmic Radio Corp., 853 Whittier St., New York 59, N. Y.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Coto-Coil Co., Inc., 65 Pavilion Ave., Providence 5, R. I.
 Cottrell Paper Co., 88 Purchase St., Fall River, Mass.
 Counter & Control Corp., 5225 W. Electric Ave., Milwaukee 14, Wis.
 Courter Electric Products, Inc., Boyne City, Mich.
 Cox & Co., Inc., 50 Broad St., New York 54, N. Y.
 Coxhead Co., Ralph C., Newark, N. J.
 Craft Mfg. Co., 3949 W. Schubert St., Chicago, Ill.
 Cramer Co., Inc., R. W., Box 13, Centerbrook, Conn.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Cratex Mfg. Co., 81 Natoma St., San Francisco 5, Calif.
 Crescent Industries, Inc., 4140 Belmont Ave., Chicago 41, Ill.
 Crest Laboratories, Inc., 84-11 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill.
 Crestwood Recorder Div., Daystrom Electric Corp., 221 N. LaSalle, Chicago 1, Ill.
 Crittenden Transformer Co., 1220 Nadeau St., Los Angeles, Calif.
 Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 Crosby Labs., Inc., Box 233, Robbins Lane, Hicksville, N. Y.
 Crosley Division, Avco Mfg. Co., 1329 Arlington St., Cincinnati 25, Ohio.
 Cross Co., H., 15 Beekman St., New York 38, N. Y.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Crucible Steel Co. of America, 405 Lexington Ave., New York 17, N. Y.
 Cryco, Inc., 1138 Mission St., South Pasadena, Calif.
 Crystal Laboratories, 640 N. Main St., Wichita, Kansas.
 Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 Cunningham Son & Co., Inc., James, 13 Canal St., Rochester, N. Y.
 Curtis Development and Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.
 Curtis-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J.
 Custom Electronics Corp., Morris Plains, N. J.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Cycle Electronics Laboratories, 356 Glenwood Ave., East Orange, N. J.
 Cyclotron Specialties Co., Moraga 8, Calif.

D & R, Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.
 X Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 Dage Electric Co., Inc., 67 N. Second St., Beech Grove, Ind.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Dale Products, Inc., Box 1, Columbus, Neb.
 Dallons Labs., 5066 Santa Monica Blvd., Los Angeles, Calif.
 Dalmo Victor Co., 1414 El Camino Real, San Carlos, Calif.
 Dalmotron Co., 534 Laurel St., San Carlos, Calif.
 Dane Electronic Labs., Inc., 316 Stuart St., Boston, Mass.
 Daniels, Inc., C. R., Box 6908, Baltimore, Md.
 Dano Electric Co., Main St., Winsted, Conn.
 Dante Electric Mfg. Co., Bantam, Conn.
 Davenport Co., 191 Central Ave., Newark 4, N. J.
 Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md.
 Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.
 Davis & Co., J. W., 9212 Denton Drive, Dallas, Texas.
 Davis Electronics, Box 1247, Burbank, Calif.
 Decade Instrument Co., Box 535, Caldwell, N. J.
 Decca Records, Inc., 50 W. 57th St., New York 19, N. Y.
 Decimeter Inc., 1430 Market St., Denver 2, Colorado.
 De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.
 Dee Electric Co., 1101 N. Paulina St., Chicago 22, Ill.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 DeJure-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y.
 Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester, N. Y.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Delmhorst Instrument Co., 601 Cedar St., Boonton, N. J.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
 Deltron Inc., P. O. Box 192, Glenside, Pa.
 Deluxe Coils, Inc., Wabash, Ind.

De Mornay-Bonardi, Inc., 3223 Burton Ave., Burbank, Calif.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Detectron Co., 5631 Cahuenga Blvd., North Hollywood, Calif.
 De-Tec-Tronic Laboratories, Inc., 1711 Terra Cotta Place, Chicago 14, Ill.
 DeWitt Development Co., 12545 S. 69th Ave., Palos Heights, Ill.
 Dial Screw Products Co., Inc., 32-21 58th St., Woodside, N. Y.
 Dialight Corporation, 60 Stewart Ave., Brooklyn 37, N. Y.
 Diamond Drill Carbon Co., 53-63 Park Row, New York 38, N. Y.
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
 Diamond Mfg. Corp., 7 North Ave., Wakefield, Mass.
 Diamond Power Specialty Corp., Lancaster, Ohio.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Dice Co., J. W., Englewood, N. J.
 Diciphone Corp., 420 Lexington Ave., New York 17, N. Y.
 Diehl Manufacturing Co., 1129 Finnerne Ave., Somerville, N. J.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.
 Dietz Design & Mfg. Co., Grandview 6, Mo.
 Dietzgen Co., Eugene, 2425 Sheffield Ave., Chicago, Ill.
 Digital Control Systems, Inc., 7858 Ivanhoe, P. O. Box 779, La Jolla, Calif.
 Digital Products, Inc., 7643 Fay St., LaJolla, Calif.
 Dilectrix Co., 211-48 Jamaica Ave., Queens Village 8, N. Y.
 Dilks Co., The, Seymour, Conn.
 Dillon & Co., Inc., W. C., 14620 Keswick St., Van Nuys, Calif.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 Dispatch Oven Co., Minneapolis, Minn.
 Ditt-Mco Inc., 729 Baltimore Ave., Kansas City 6, Mo.
 Division Lead Co., 836 W. Kinzie St., Chicago 22, Ill.
 Do All Co., 254 N. Laurel Ave., Des Plaines, Ill.
 Doelcam Corp., 56 Elmwood St., Newton 58, Mass.
 Doepke Mfg. Co., Inc., Chas. Wm., Metal Specialties Div., Rossmoyne, Ohio.
 Dolin Metal Products, Inc., 315 Lexington Ave., Brooklyn 16, N. Y.
 Dolinko & Wilkins, Inc., 1901-7 Summit Ave., Union City, N. J.
 Dollar Co., Robert, Communications Equipment Div., 50 Drumm St., San Francisco 11, Calif.
 Dollin Corp., 600 S. 21st St., Irvington 11, N. J.
 Dondar Devices, P. O. Box 187, La Canada, Calif.
 Donham Craft, Inc., Thomaston, Conn.
 Donnelly Electric & Mfg. Co., 3050 Washington St., Boston, Mass.
 Dornmeyer Industries, 3418 N. Milwaukee Ave., Chicago 14, Ill.
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
 Dorne and Margolin, 30 Sylvester St., Westbury, N. Y.
 Douglas Microwave Co., Inc., 338 E. 95th St., New York 28, N. Y.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 Dow Chemical Co., Midland, Mich.
 Dow Corning Corp., Midland, Mich.
 Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Ill.
 Drake Mfg. Co., 1713 Hubbard St., Chicago, Ill.
 Dremel Mfg. Co., 2300 18th St., Racine, Wis.
 Dresser Electric Co., 942 E. Larned St., Detroit 7, Mich.
 Dresser-Stacey Co., Ideco Div., 875 Michigan Ave., Columbus 8, Ohio.
 Driver Co., Wilbur B., 150 Riverside Ave., Newark 4, N. J.
 Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa.
 Dumont Electric Co., 308 Dyckman St., New York, N. Y.
 DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 DuMont Laboratories, Inc., Allen B., Television Receiver Div., 35 Market St., East Paterson, N. J.
 DuMont Laboratories, Inc., Allen B., Television Transmitter Div., 1500 Main Ave., Clifton, N. J.
 Dumore Co., The, 1300 Seventeenth St., Racine, Wis.
 Duncan & Bayley Division, 785 Hertel Ave., Buffalo 7, N. Y.
 Dunn Engineering Associates, Inc., 11 Windsor St., Cambridge 39, Mass.
 Dunton Co., M. W., 7 Goff St., Providence, R. I.
 Duotone Co., Inc., Keyport, N. J.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Durakool, Inc., 1010 N. Main St., Elkhart, Ind.
 Duramark, Inc., 2 Secatog Ave., Port Washington, N. Y.
 Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.
 Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.
 Duro Specialty Co., Inc., 811 Boston St., West Lynn, Mass.
 Dyna Labs., Inc., 1075 Stewart Ave., Garden City, N. Y.
 Dynamic Air Engineering Inc., 7412 Maie Ave., Los Angeles 1, Calif.
 Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.
 Dzus Fastener Co., Inc., Box 185, Babylon, N. Y.

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
 Eagle Pencil Co., 703 E. 13th St., New York, N. Y.
 Eagle Signal Corp., Moline, Ill.
 Eastern Air Devices Inc., 585 Dean St., Brooklyn 17, N. Y.
 Eastern Mike-Stand Co., 56 Christopher Ave., Brooklyn 12, N. Y.
 Eastern Precision Resistor Corp., 130-11 90 Ave., Richmond Hill 18, N. Y.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Eastern Specialty Co., Philadelphia 40, Pa.
 Eastern Tool & Mfg. Co., 1 Montgomery St., Belleville 9, N. J.
 Eastman Chemical Products, Inc., Kingsport, Tenn.
 Eastman Kodak Co., Industrial Photographic Div., 343 State St., Rochester 4, N. Y.
 Easy-Up Tower Co., 908 State St., Racine, Wis.
 Eaton Mfg. Co., Reliance Div., Massillon, Ohio.
 Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N. Y.
 Ebert Electronics Co., 212-26 Jamaica Ave., Queens Village 28, N. Y.
 Eby, Inc., Hugh H., 4700 Stenton Ave., Philadelphia 44, Pa.
 Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.
 Eckstein Radio & Television Co., 3400 E. 42nd St., Minneapolis 6, Minn.
 Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
 Economy Fuse & Mfg. Co., 2717 Greenview Ave., Chicago 14, Ill.
 Ectro, Inc., Delaware, Ohio.
 Edciff Instruments, 383 N. Foothill Blvd., Pasadena 8, Calif.
 Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
 Edin Co., Inc., 207 Main St., Worcester, Mass.
 Edison, Inc., Thomas A., Ediphone Div., 51 Lakeside Ave., West Orange, N. J.
 Edison, Inc., Thomas A., Instrument Div., 81 Lakeside Ave., West Orange, N. J.
 Edo Corp., College Point, N. Y.
 Eicor, Inc., 1501 W. Congress St., Chicago 7, Ill.
 Eidson Electronic Co., 1802 N. Third St., Temple, Texas.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
 Eitel-McCullough, Inc., San Bruno, Calif.
 Elastic Stop Nut Corp., 2330 Vauxhall Rd., Union, N. J.
 Elco Corporation, 190 W. Glenwood Ave., Philadelphia 40, Pa.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electra Mfg. Co., Resistor Div., 2537 Madison Ave., Kansas City, Mo.
 Electralab Inc., 105 First St., Cambridge, Mass.
 Electran Mfg. Co., 1901 Clybourn, Chicago 3, Ill.
 Electric Design & Mfg. Corp., Burlington, Iowa.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Electric Finace Co., Salem, Ohio.
 Electric Indicator Co., Camp Ave., Springdale, Conn.
 Electric Machinery Mfg. Co., 1331 N.E. Tyler St., Minneapolis 13, Minn.
 Electric Regulator Corp., Pearl St., Norwalk, Conn.
 Electric Soldering Iron Co., W. Elm St., Deep River, Conn.
 Electric Specialty Co., 300 South St., Stamford, Conn.
 Electric Storage Battery Co., 42 S. 15th St., Philadelphia 2, Pa.
 Electrical Communications Co., 765 Clementina St., San Francisco, Calif.
 Electrical Industries, Inc., 44 Summer Ave., Newark 4, N. J.
 Electrical & Physical Instrument Corp., 42-19 27th St., Long Island City 1, N. Y.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electrical Tower Service, Inc., 206 S. Washington St., Peoria, Ill.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
 Electrocoil Transformer Co., Westerly Rd., Ossining, N. Y.
 Electro Circuits, Inc., 401 E. Green St., Pasadena, Calif.
 Electro-Coatings, Inc., 1662 W. Fullerton Ave., Chicago 14, Ill.
 Electro Craft, Inc., 68 Jackson St., Stamford, Conn.
 Electro Development Corp., 6014 W. Washington Blvd., Culver City, Calif.
 Electro Engineering Products Co., 609 W. Lake St., Chicago, Ill.
 Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
 Electro Impulse Labs., 62 White St., Red Bank, N. J.
 Electro-Mec Laboratory, 21-09 43rd Ave., Long Island City, N. Y.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 Electro-Mechanical Specialties Co., 6819 Melrose St., Los Angeles 38, Calif.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Electro Metallurgical Co., A Div. of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Electro Motive Mfg. Co., South Park & John St., Williamst., Conn.
 Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia 25, Pa.
 Electro-Physical Laboratories, Inc., 65 Harvard Ave., Stamford, Conn.
 Electro Precision Products, Inc., 119-01 22nd Ave., College Point, N. Y.
 Electro Products Labs., 4501 N. Ravenswood Ave., Chicago 40, Ill.
 Electro-Seal Corp., 946 North Ave., Des Plaines, Ill.

Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
 Electro-Snap Switch & Mfg. Co., 4218 W. Lake St., Chicago 24, Ill.
 Electro Switch Corp., 167 King Ave., Weymouth 88, Mass.
 Electro Tec Corp., South Hackensack, N. J.
 Electro-Tech Equipment Co., 55 Lispenard St., New York 13, N. Y.
 Electro-Technical Products Div. of Sun Chemical Corp., 113 E. Centre St., Nutley 10, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.
 Electro-Wire Service, 5 Beekman St., New York 7, N. Y.
 Electrochemical Industries, Inc., Jacques St., Worcester, Mass.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.
 Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn, Ill.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Electronic Associates, Inc., Long Branch, N. J.
 Electronic Batteries Inc., Bush Terminal Bldg. No. 4, 28-34 35th St., Brooklyn 32, N. Y.
 Electronic Coils, Inc., P. O. Box 1641, 44 Taylor St., Springfield, Mass.
 Electronic Computer Div., Underwood Corp., 160 Avenue of the Americas, New York 13, N. Y.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electronic Devices, Inc., Precision Rectifier Div., 429 12th St., Brooklyn, N. Y.
 Electronic Engineering Associates, Ltd., 1048 Brittan Ave., San Carlos, Calif.
 Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 4, Calif.
 Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J.
 Electronic, Inc., 67 Sixteenth Ave., S.W., Cedar Rapids, Iowa.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
 Electronic Mfg. Co., 20 Orange St., Newark, N. J.
 Electronic Measurements Co., Inc., Lewis St. & Maple Ave., Eatontown, N. J.
 Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
 Electronic Medical Foundation, 2452 Van Ness Ave., San Francisco, Calif.
 Electronic Parts Mfg. Co., 508 25th St., Union City, N. J.
 Electronic Processes Corp., 1021 San Antonio Road, Los Altos, Calif.
 Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.
 Electronic Research Associates, Box 29, Caldwell, N. J.
 Electronic Specialty Products Co., Pleasant Plains Rd., Millington, N. J.
 Electronic Systems Co., 578 E. 161st St., New York 56, N. Y.
 Electronic Transformer Co., Inc., 207 W. 25th St., New York, N. Y.
 Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.
 Electronics of Colorado, Inc., 1026 S. Tejon St., Colorado Springs, Colo.
 Electrons, Inc., 127 Sussex Ave., Newark 4, N. J.
 Electrotechnic Corp., 15601 Arrow Hwy., Azusa, Calif.
 Electrovox Co., Inc., 60 Franklin St., East Orange, N. J.
 Electyde Motor Products Corp., Genoa, Ill.
 Elex Co., 69-19 215th St., Bayside, N. Y.
 Ellanar Chemical Co., 2308 Oakton St., Evanston, Ill.
 Ellis Associates, Box 77, Pelham 65, N. Y.
 Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
 El Mec Laboratories, Inc., 380 Hillside Ave., Hillside, N. J.
 Eltran Corp., St. Anne, Ill.
 El-Tronics, Inc., 2649 N. Howard St., Philadelphia 33, Pa.
 Embassy Engineering Corp., 224 E. 204th St., New York 58, N. Y.
 Emerald Mfg. Co., 6025 N. Keystone Ave., Chicago 30, Ill.
 Emerson & Cuming, Inc., 869 Washington St., Canton, Mass.
 Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.
 Empire Coil Co., Inc., Beechwood Ave. & Second St., New Rochelle, N. Y.
 Empire Devices, Inc., 38-25 Bell Blvd., Bayside 61, N. Y.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
 Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.
 Engineered Precision Casting Co., Box 68, Matawan, N. J.
 Engineering Co., 27 Wright St., Newark, N. J.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
 Enthone, Inc., 442 Elm St., New Haven 2, Conn.
 Entwistle Co., James L., P. O. Box 176, Providence 7, R. I.
 Epco Electronics, 140 Liberty St., New York, N. Y.
 Epco Products, Inc., 2500 Atlantic Ave., Brooklyn 17, N. Y.
 Eppley Lab., Inc., The Newport, R. I.
 Equipment & Service Co., 6815 Oriole Drive, Dallas 9, Texas.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City, Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.
 Erie Resistor Corp., 644 W. 12th St., Erie, Pa.
 Erwood, Inc., 1770 Berteau Ave., Chicago 13, Ill.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Esquire Radio Corp., 26 Court St., Brooklyn 19, N. Y.
 Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
 Essex Electronics, Berkeley Heights, N. J.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
 Esterline-Angus Co., P. O. Box 596, Indianapolis 6, Ind.
 Etched Products Corp., 39-01 Queens Blvd., Long Island City, N. Y.
 Ethylene Chemical Corp., 245 Broad St., Summit, N. J.
 Eureka Television & Tube Corp., 69 Fifth Ave., Hawthorne, N. J.
 Eveready Plating Co., 1790 First Ave., New York, N. Y.
 Executone, Inc., 415 Lexington Ave., New York 17, N. Y.
 Extruders, Inc., 3232 W. El Segundo Blvd., Hawthorne, Calif.
 Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
 Fairchild Camera & Instrument Corp., Park Ave., Hicksville, N. Y.
 Fairchild Camera & Instrument Corp., Robbins Lane, Syosset, N. Y.
 Fairchild Recording Equipment Corp., 154th St., & 7th Ave., Whitestone, N. Y.
 Falstrom Co., 44 Falstrom Court, Passaic, N. J.
 Fasteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
 Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.
 Farmers Engineering & Mfg. Co., Irwin, Pa.
 Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.
 Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa.
 Fasco Industries, Inc., Rochester 2, N. Y.
 Fast & Co., John E., 3157 N. Pulaski Rd., Newark 5, 41, Ill.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
 Federal Engineering Co., 37 Murray St., New York 7, N. Y.
 Federal Instrument Corp., 14-02 Broadway, Long Island City 6, N. Y.
 Federal Mfg. & Engineering Corp., 211 Steuben St., Brooklyn 5, N. Y.
 Federal Screw Products Inc., 224 W. Huron St., Chicago 10, Ill.
 Federal Shock Mount Corp., 1077 Intervale Ave., New York 59, N. Y.
 Federal Telecommunication Labs., Inc., 500 Washington Ave., Nutley 10, N. J.
 Federal Telephone and Radio Corp., 88 Kingsland Rd., Clifton, N. J.
 Federal Tool Engineering Co., 1386 Pompton Ave., Cedar Grove, N. J.
 Federal Tool & Mfg. Co., 3600 Alabama Ave., St. Louis Park, Minneapolis 16, Minn.
 Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 Felters Co., 210 South St., Boston, Mass.
 Fenwal, Inc., 60 Pleasant St., Ashland, Mass.
 Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
 Ferranti Electric, Inc., 30 Rockefeller Plaza, New York 20, N. Y.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
 Ferris Instrument Co., 110 Cornelia St., Boonton, N. J.
 Ferroxcube Corp. of America, 1000 E. Bridge St., Saugerties, N. Y.
 Fidelitone, Inc., 1616 Devon Ave., Chicago 26, Ill.
 Fidelity Amplifier Co., 703 Willow St., Chicago 14, Ill.
 Fidelity Chemical Products Corp., 472 Frelinghuysen Ave., Newark, N. J.
 Fidelity Tube Corp., 900 Passaic Ave., East Newark, N. J.
 Field Electrical Instrument Co., 8 N. Manheim Blvd., New Paltz, N. Y.
 Fielden Instrument Div. of Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.
 Film Capacitors, Inc., 337 E. 139th St., New York 54, N. Y.
 Filters, Inc., Electroquipt Controls Div., 30 Sagamore Hill Drive, Port Washington, N. Y.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 Finn & Co., Inc., T. R., 333 Jackson Ave., New York 54, N. Y.
 Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Fischer & Co., R. A., 517 Commercial St., Glendale 3, Calif.
 Fisher-Pierce Co., 170 Pearl St., South Braintree (Boston 85), Mass.
 Fisher Radio Corp., 41 East 47th Street, New York, N. Y.
 Fisher Research Lab., Inc., 1961 University Ave., Palo Alto, Calif.
 Five Star Co., 440 Mixville Rd., West Cheshire, Conn.
 Flatto Mfg. Co., 70 W. 40th St., New York 18, N. Y.
 Flexible Shaft Div., Walker Turner Div., Kearney & Trecker Corp., Plainfield, N. J.
 Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 Fluke Engineering Co., John, 1111 W. Nickerson St., Seattle 99, Wash.
 Flush Wall Radio Co., 1012 Cleveland St., Clearwater, Fla.
 Foot Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill.
 Foote Mineral Co., 18 W. Chelton Ave., Philadelphia 44, Pa.
 Ford Engineering Co., 129 East A St., Upland, Calif.
 Ford Instrument Div., The Sperry Corp., 31-10 Thomson Ave., Long Island City, N. Y.
 Ford Radio & Mica Corp., 536 63rd St., Brooklyn, N. Y.
 Fordham Mfg. Co., 2220 Pearsall Ave., New York 69, N. Y.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 Formatic Co., 178 Bridge St., Naugatuck, Conn.
 Formica Co., 110 K St., South Boston, Mass.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 Forter-Teichmann Co., Clark Bldg., Pittsburgh, Pa.
 Forty Niner Co., 5245 Grand River, Detroit 8, Mich.
 Foster Transformer Co., Inc., 3820 Colerain Ave., Cincinnati 23, Ohio.
 Fostoria Pressed Steel Corp., Fostoria, Ohio.
 Foxboro Co., The, Foxboro, Mass.
 Frankel Connector Co., 27 Vestry St., New York, N. Y.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
 Freed Transformer Co., Inc., 1736 Weirfield St., Brooklyn 27, N. Y.
 Frenchtown Porcelain Co., Trenton 9, N. J.
 Frequency Standards, Box 604, Ashbury Park, N. J.
 Fretco Television Co., Inc., 1041 Forbes St., Pittsburgh 19, Pa.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Frying Mfg. Co., 639 W. 12th St., Erie, Pa.
 Fugle-Miller Laboratories, Inc., 398 Main St., Metuchen, N. J.
 Fulton Slyphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.
 Furst Electronics, 3322 W. Lawrence Ave., Chicago 25, Ill.
 Fusite Corp., 6000 Fernview Ave., Cincinnati 13, Ohio.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 G-M Laboratories, Inc., 4336 N. Knox Ave., Chicago, Ill.
 G-V Controls Inc., 12 Hollywood Plaza, East Orange, N. J.
 Gadgets Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
 Gaertner Scientific Corp., 1239 Wrightwood Ave., Chicago 14, Ill.
 Galbraith & Son Electric Corp., C. C., 450 Ave. of the Americas, New York 11, N. Y.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 Galvanic Products Corp., 110 E. Hawthorne Ave., Valley Stream, N. Y.
 Gamewell Co., The, Newton Upper Falls 64, Mass.
 Gamma Instrument Co., Inc., 378 Great Neck Rd., Great Neck, N. Y.
 Garde Mfg. Co., 588 Eddy St., Providence 3, R. I.
 Gardner Electric Mfg. Co., 4227 Hollis St., Emeryville 8, Calif.
 Garlock Packing Co., Palmyra, N. Y.
 Garod Radio Corp., 29 Washington St., Brooklyn 1, N. Y.
 Garrard Sales Corp., 164 Duane St., New York 13, N. Y.
 Garrett Co., Inc., George K., D & Tioga Sts., Philadelphia 34, Pa.
 Gaston Power Tools, Inc., 14829 Loomis St., Harvey, Ill.
 Gates Radio Co., Quincy, Ill.
 Gatti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J.
 Gavco Corp., Sub. of General Aviation Corp., 540 E. 80th St., New York 21, N. Y.
 Gear Specialties, Inc., 2635 W. Medill Ave., Chicago 47, Ill.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Cement Mfg. Co., 919 Taylor Ave., Rockford, Ill.
 General Ceramics & Steatite Corp., Keasbey, N. J.
 General Chemical Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
 General Communication Co., 681 Beacon St., Boston 15, Mass.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 General Controls Co., Glendale 1, Calif.
 General Dyestuff Corp., 435 Hudson St., New York 14, N. Y.
 General Electric Co., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 General Electric Co., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn.
 General Electric Co., Electronics Div., Electronics Park, Syracuse, N. Y.
 General Electric Co., Lamp Div., Nela Park, Cleveland 12, Ohio.
 General Electric Co., Tube Dept., 1 River Rd., Schenectady 5, N. Y.
 General Electric Co., Wiring Device Dept., Providence 7, R. I.
 General Electronics Div. Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 General Electrosonics, Inc., 32 W. 22nd St., New York 10, N. Y.
 General Fuse Co., 16 Robert St., South River, N. J.
 General Hermetic Sealing Corp., 99 E. Hawthorne Ave., Valley Stream, N. Y.
 General Industries Co., Taylor and Olive Sts., Elyria, Ohio.
 General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 General Magnetic Corp., 10001 Erwin Ave., Detroit 34, Mich.
 General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

General Mills, Inc., Mechanical Div., 1620 Central Ave., Minneapolis 13, Minn.

General Motors Corp., Detroit Diesel Engine Div., Detroit, Mich.

General Photo Products Co., Inc., 15 Summit Ave., Chatham, N. J.

General Plastics Corp., 1011 Main Ave., Clifton, N. J.

General Precision Laboratory, Inc., 63 Bedford Rd., Pleasantville, N. Y.

General R-F Fittings Co., 702 Beacon St., Boston 15, Mass.

General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.

General Tire & Rubber Co., The, Akron, Ohio.

General Transformer Co., 18240 Harwood Ave., Homewood, Ill.

Georator Corp., Box 463, Manassas, Va.

George Co., P. D., 5200 N. Second St., St. Louis, Mo.

Geotronic Labs., Inc., Dallas 11, Texas.

Gerber Scientific Instrument Co., 89 Spruce St., Hartford 1, Conn.

Gerrett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.

Gering Products Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.

Germanium Products Corp., 26 Cornelson Ave., Jersey City 4, N. J.

Gertsch Products, Inc., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif.

Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.

Gibson Electric Co., 8361 Frankstown Ave., Pittsburgh 21, Pa.

Giuffran Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.

Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.

Girdler Corp., Thermex Div., 224 E. Broadway, Louisville 1, Ky.

Gisholt Machine Co., 1245 E. Washington Ave., Madison 3, Wis.

Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.

Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn, N. Y.

Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.

Glasscraft Co., 5210 E. Olympic Blvd., Los Angeles 22, Calif.

Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio.

Glass & Bro., Harry, 10 Van Cortlandt Ave., E., Bronx 68, N. Y.

Glass Solder Engineering, 845 El Centro St., South Pasadena, Calif.

Glasic Corp., The, 1823 E. 40th St., Cleveland 3, Ohio.

Gleason-Avery, Inc., Auburn, N. Y.

Glenco Corp., Metuchen, N. J.

Globar Division, Carborundum Co., Niagara Falls, N. Y.

Globe Industries, Inc., 125 Sunrize Place, Dayton 7, Ohio.

Globe Phone Mfg. Co., 2 Linden St., Reading, Mass.

Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.

Goat Co., Inc., Fred, 308 Dean St., Brooklyn 17, N. Y.

Godfrey Mfg. Co., 2642 S. Michigan Ave., Chicago, Ill.

Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.

Gombos Co., Inc., John, 103 Montgomery Ave., Irvington 11, N. J.

Gonset Co., 801 S. Main St., Burbank, Calif.

Good-All Electric Mfg. Co., 112 W. First St., Ogallala, Neb.

Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.

Goodmans Industries, Ltd., Axiom Works, Wembley, Middlesex, England.

Goodrich Chemical Co., B. F., Rose Bldg., 2060 E. Ninth St., Cleveland 15, Ohio.

Goodyear Aircraft Corp., 1210 Massillon Road, Dept. 65, Akron 15, Ohio.

Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.

Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.

Gorrell & Gorrell, Haworth, N. J.

Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank, Calif.

Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.

Gould Corp., Jerome F., 242 Randolph St., Brooklyn, N. Y.

Gould-National Batteries, Inc., 35 Neoga St., Depew, N. Y.

Gow-Mac Instrument Co., 22 Lawrence St., Newark 5, N. J.

Grafo Colloids Corp., Sharon, Pa.

Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, R. I.

Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.

Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.

Grant Pulley & Hardware Co., 31-85 Whitestone Pkwy., Flushing, N. Y.

Graphite Metallizing Corp., 1041 Nepperhan Ave., Yonkers 3, N. Y.

Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.

Gray Radio Co., 501 Forest Hill Blvd., West Palm Beach, Fla.

Gray Research & Development Co., Inc., 658 Hilliard St., Manchester, Conn.

Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.

Grayhill, 537 Hillgrove Ave., La Grange, Ill.

Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill.

Green Electric Co., W., 130 Cedar St., New York, N. Y.

Green Instrument Co., 363A Putnam Ave., Cambridge, Mass.

Greenwood Packaging Supply Co., 859 Summer Ave., Newark, N. J.

Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.

Grieve-Hendry Co., 1815 W. Lake St., Chicago 12, Ill.

Griffin Co., John, 2157 James Ave., St. Paul 5, Minn.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

Groov-Pin Corp., 1125 Hendricks Causeway, Ridgefield, N. J.

Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, Ill.

Gudebrod Bros. Silk Co., Inc., Electronics Div., 225 W. 34th St., New York 1, N. Y.

Gudeman Co., 340 W. Huron St., Chicago 10, Ill.

Gulton Mfg. Corp., Metuchen, N. J.

Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, Ill.

Gyromechanisms, Inc., Halesite, N. Y.

Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.

Hagen Mfg. Co., Inc., Baraboo, Wis.

Haley Electronics Co., 57 William St., New York 5, N. Y.

Halldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill.

Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.

Hallcrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.

Haloid Co., The, 6 Haloid St., Rochester, N. Y.

Halowax Products Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.

Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.

Handy & Harman, 82 Fulton St., New York 38, N. Y.

Hanover Developments, 401 E. 74th St., New York 21, N. Y.

Hanovia Chemical & Mfg. Co., 233 N. J. R.R. Ave., Newark, N. J.

Hansell, Inc., U., The, Westerly, R. I.

Hansen Mfg. Co., Inc., Princeton, Indiana.

Harder Co., Donald C., 3338 India St., San Diego 1, Calif.

Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.

Hardwick Hindle, Inc., 40 Hermon St., Newark 5, N. J.

Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.

Harper Co., The, H. M., 8200 Lehigh Ave., Morton Grove, Ill.

Harper Electric Furnace Corp., 39E-River St., Buffalo 2, N. Y.

Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.

Hart Moisture Gauges, Inc., 126 Liberty St., New York 6, N. Y.

Hartford City Paper Co., Hartford City, Ind.

Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.

Harvey Hubbell, Inc., State St. & Bostwick Ave., Bridgeport 2, Conn.

Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.

Hassall, Inc., John, Clay and Oakland Sts., Brooklyn 22, N. Y.

Hastings Instrument Co., Inc., Hampton 9, Va.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Hauman Instruments Co., 70 Coolidge Rd., Watertown 72, Mass.

Hawley Products Co., St. Charles, Ill.

Hayden Mfg. Co., 173 N. Peoria, Chicago 7, Ill.

Haydon Co., A. W., The, 232 N. Elm St., Waterbury 20, Conn.

Haydon Mfg. Co., Inc., 584 E. Elm St., Torrington, Conn.

Haydon Switch Co., 232 N. Elm St., Waterbury, Conn.

Haydu Brothers, Plainfield, N. J.

Haynes Stellite Co., Division of Union Carbide & Carbon Corp., Kokomo, Ind.

Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.

Heath Co., Benton Harbor, Mich.

Heiland Research Corp., 130 E. 5th Ave., Denver 9, Colo.

Heinemann Electric Co., 97 Plum St., Trenton 2, N. J.

Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.

Heinz Electric Co., 685 Lawrence St., Lowell, Mass.

Heldor Mfg. Co., Div. of Heldor Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J.

Heli-Coil Corp., Shelter Rock Rd., Danbury, Conn.

Heliprot Corp., 916 Meridian Ave., South Pasadena, Calif.

Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.

Heminway & Bartlett Mfg. Co., 500 Fifth Ave., New York 36, N. Y.

Henkel-Claus Co., Fremont, Ohio.

Heppner Mfg. Co., P. O. Box 612, Round Lake, Ill.

Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.

Herlec Corp., The, 422 N. Fifth St., Milwaukee 3, Wis.

Hermaseal Co., The, Riverside Drive, Elkhart, Ind.

Hermes Engraving Co., 13 University Place, New York 3, N. Y.

Hermes Plastics, Inc., 13-19 University Place, New York 3, N. Y.

Hermetic Seal Products Co., 29-37 South 6th St., Newark 7, N. J.

Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.

Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.

Hetherington, Inc., Sharon Hill, Pa.

Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.

Hexacon Electric Co., 130 W. Clay Ave., Roselle Park, N. J.

Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.

Heyman Mfg. Co., Kenilworth 2, N. J.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

High Speed Hammer Co., Rochester, N. Y.

High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.

Highland Engineering Co., Main St. & Urban Ave., Westbury, N. Y.

Hillburn Electronic Products Co., 55 Nassau Ave., Brooklyn 22, N. Y.

Hillyer Instrument Co., Inc., 54 Lafayette St., New York 13, N. Y.

Hinckley Technical Associates, Inc., 75 Orchard St., Belmont 7, Mass.

Hinde & Dauch, Sandusky, Ohio.

Hindle Transformer Co., Inc., Flemington, N. J.

Hi-Q Division, Aerovox Corp., Seneca Ave., Olean, N. Y.

Hitemp Wires, Inc., 26 Windsor Ave., Mineola, N. Y.

Hi-Test Chemical Corp., 722 64th St., Brooklyn 20, N. Y.

Hivolt Ltd., 34A Pottery Lane, London W. 11, England.

Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.

Hobson Brothers, 4049 W. Fullerton St., Chicago 39, Ill.

Hoffman Engineering Corp., Anoka, Minn.

Hoffman Radio Corp., 3716 S. Hill Street, Los Angeles 7, Calif.

Hofmann Corp., C. L., 643 Liberty Ave., Pittsburgh 22, Pa.

Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.

Holl Audio Inc., 5014 N. Encinta Ave., Temple City, Calif.

Holliston Mills, Inc., Norwood, Mass.

Holtzer-Cabot, Div. of National Pneumatic Co., Inc., 125 Amory St., Boston 19, Mass.

Holub Industries, Inc., 414 DeKalb Ave., Sycamore, Ill.

Holyoke Wire & Cable Co., Holyoke, Mass.

Home Recording Products Corp., Freeport, N. Y.

Homelite Corp., Port Chester, N. Y.

Hopkins Engineering Co., 2082 Lincoln Ave., Altadena, Calif.

Hopp Press, Inc., 460 W. 34th St., New York, N. Y.

Hopwood Retinning Co., Inc., 198 Pacific Ave., Jersey City, N. J.

Hopwood Retinning Corp., 303 Commercial St., Malden, Mass.

Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.

Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

Houlihan Company, T. J., 2508-14 W. Lawrence Avenue, Chicago 25, Ill.

Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke, Mich.

Howard Industries, Inc., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis.

Huck Mfg. Co., Detroit, Mich.

Hudson Lamp Co., 528 Elm St., Arlington, N. J.

Hudson Tool & Die Co., Inc., 118 S. 14th St., Newark, N. J.

Hudson Wire Co., Ossining, N. Y.

Hufco Industries, 2815 W. Olive, Burbank, Calif.

Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.

Hughes Aircraft Co., Florence Ave. at Teale St., Culver City, Calif.

Hughey & Phillips, P. O. Box 686, Encino, Calif.

Hunt Corp., The, 453 Lincoln St., Carlisle, Pa.

Hunter Spring Co., 21 Spring Ave., Lansdale, Pa.

Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago 37, Ill.

Huse Liberty Mica Co., 171 Camden St., Boston, Mass.

Hycor Mfg. Co., 2961 E. Colorado St., Pasadena, Calif.

Hycor Company, Inc., 11423 Vanowen St., North Hollywood, Calif.

Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.

Hy-Lite Antennae, Inc., 242 E. 137th St., New York 51, N. Y.

Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.

I. D. E. A., 7900 Pendleton Pike, Indianapolis 26, Ind.

I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.

Ideal Industries, Inc., 5103 Park & Borden Avenues, Sycamore, Ill.

Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.

Illinois Condenser Co., 1616 N. Throop St., Chicago 22, Ill.

Illinois Electric Porcelain Co., Macomb, Ill.

Illinois Testing Labs., Inc., 420 N. La Salle Street, Chicago 10, Ill.

Illinois Wood Products Corp., 1656 N. Besly Court, Chicago 22, Ill.

Isco Copper Tube & Products, Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio.

Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.

Imtra Corp., 58 Charles St., Cambridge 41, Mass.

Indiana Steel Products Company, The, Valparaiso, Indiana.

Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.

Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y.

Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill.

Industrial Control Co., Straight Path & Arlington Ave., Wyandanch, N. Y.

Industrial Devices Inc., 22 State Rd., Edgewater, N. J.

Industrial Electrical Works, 1509 Chicago St., Omaha 2, Nebraska.

Industrial Electronics Co., Inc., Hanover, Mass.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
Industrial Hardware Mfg. Co., Inc., 109 Prince St., New York, N. Y.
Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
Industrial Mica Corp., 223 S. Van Brunt St., Englewood, N. J.
Industrial Products Co., Danbury, Conn.
Industrial Rectifier Co., 120 Cedar St., New York, N. Y.
Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, Ill.
Industrial Retaining Ring Co., 8 W. Sidney Ave., Mount Vernon, N. Y.
Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.
Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
Industrial Test Equipment Co., 55 E. 11th St., New York 3, N. Y.
Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
Industrial Transformer Co., Gouldsboro, Pa.
Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
Ingram Co., E., Bristol, Conn.
Inst-X Co., Inc., Water St., Ossining, N. Y.
Instron Engineering Corp., 2 Hancock St., Quincy 71, Mass.
Instrument Corp. of America, Blacksburg, Va.
Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
Instrument Electronics Corp., 90 Main St., Port Washington, N. Y.
Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
Instrument Parts Corp., P. O. Box 150, Ossining, N. Y.
Instrument Resistors Co., 1036 Commerce Ave., Union, N. J.
Instrument Specialties Co., Inc., 254 Bergen Blvd., Little Falls, N. J.
Instrument Wire Co., Guilford, Conn.
Instruments Components, Inc., 1834 Franklin St., Santa Monica, Calif.
Insulative Co., 1 Broadway, New York, N. Y.
Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
Insuline Corp. of America, 36-02 35th Avenue, Long Island City, N. Y.
Integrated Mica Corp., 202 Franklin Place, Woodmere, N. Y.
Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
International Electronics Corp., 137 Hudson St., New York 13, N. Y.
International Instruments, Inc., P. O. Box 2954, New Haven 15, Conn.
International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
International Pump & Machine Works, 11-13 Governor St., Newark 2, N. J.
International Radant Corp., 40 Matinecock Ave., Port Washington, N. Y.
International Rectifier Corp., 1521 E. Grand Ave., El Segundo, Calif.
International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
International Television Corp., 238 William St., New York 38, N. Y.
Investment Casting Co., 319 Chestnut St., Newark 5, N. J.
Ippolito & Co., Inc., James, 401 Concord Ave., Bronx 54, N. Y.
Irvington Varnish & Insulator Co., 6 Argyle Terrace, Irvington 11, N. J.
Isolantite Mfg. Corp., Stirling, N. J.

J-B-L Instrument Co., Sycamore & Mill Rds., Clifton Heights, Pa.
J-B-T Instruments, Inc., 431 Chapel St., New Haven 8, N. Y.
J F D Mfg. Co., Inc., 6101-23 Sixteenth Ave., Brooklyn, N. Y.
Jack & Heintz, Inc., Cleveland 1, Ohio.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda, Md.
Jacobson Mfg. Co., Inc., Kenilworth 2, N. J.
Jaen Electromotive Corp., 10-02 44th Drive, Long Island City, N. Y.
James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18, Ill.
Jan Hardware Mfg. Co., Inc., 25-30 163rd St., Flushing 58, N. Y.
Janco Corp., 3111 Winona Ave., Burbank, Calif.
Janette Mfg. Co., Morton Grove, Illinois.
Jarrel-Ash Co., 165 Newbury St., Boston 16, Mass.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
Javex, P. O. Box 646, Redlands, Calif.
Jeffers Electronics Div. of Speer Carbon Co., Du Bois, Pa.

Jefferson Electric Co., Bellwood, Ill.
Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y.
Jelliff Mfg. Corp., C. O., 200 Pequot Ave., Southport, Conn.
Jem-O-Matic, Inc., 530 Cherry Lane, New Hyde Park, N. Y.
Jen Products, Inc., 419 W. 42nd St., New York, N. Y.
Jennings Radio Mfg. Co., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif.
Jensen Industries Inc., 329 S. Wood St., Chicago, Ill.
Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
Jersey Specialty Co., Little Falls, N. J.
Jiffy Clip Mfg. Co., 128 Clinton Ave., Huntington, N. Y.
Jobbins Electronic Enterprises, Menlo Park, Calif.
Johanson Mfg. Co., Boonton, N. J.
Johns-Manville, 22 E. 40th St., New York 16, N. Y.
Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.
Johnson Co., E. F., Waseca, Minn.
Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
Johnson-Williams, Ltd., 2526 3rd St., Palo Alto, Calif.
Johnston Foil Mfg. Co., 6100 S. Broadway, St. Louis 11, Mo.
Jones Electronics Co., M. C., 96 N. Main St., Bristol, Conn.
Jones Div., Howard B., Cinch Mfg. Corp., 1026 S. Homan Ave., Chicago 24, Ill.
Jordan Electronic Mfg. Co., Inc., Union Bldg., 119 E. Union St., Pasadena 1, Calif.
Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
Joy Mfg. Corp., Oliver Bldg., Pittsburgh 22, Pa.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.

K. F. Development Co., 867 Woodside Way, San Mateo, Calif.
K-V Transformer Corp., Danbury, Conn.
Kaer Engineering Co., 2995 Middlefield Road, P. O. Box 1320, Palo Alto, Calif.
Kahle Engineering Co., 1350 Seventh St., North Bergen, N. J.
Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.
Kalbfed Labs., Inc., 1090 Morena Blvd., San Diego 10, Calif.
Kanthal Corp., Amelia Place, Stamford, Conn.
Karp Metal Products Co., Div. of H & B Machine Co., 215 63rd St., Brooklyn 20, N. Y.
Kartron, Inc., Drawer 472, Huntington Beach, Calif.
Kato Engineering Co., 1415 First Ave., Mankato, Minn.
Kaupp & Sons, C. B., 32 Newark Way, Maplewood, N. J.
Kay Electric Co., 25 Maple Ave., Pine Brook, N. J.
Kaye-Halbert Corp., 3555 Hayden Ave., Culver City, Calif.
Kearfott Co., Inc., 1150 McBride Ave., Little Falls, N. J.
Keasbey & Mattison, Ambler, Pa.
Keithley Instruments, 3868 Carnegie Ave., Cleveland 15, Ohio.
Keller Products Co., 41 Union St., Manchester, N. H.
Kelllogg Co., M. W., P. O. Box 469, Jersey City 3, N. J.
Kelllogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
Kelnor Mfg. Corp., 222 Kearny St., San Francisco 8, Calif.
Kemet Co., A Div. of Union-Carbide & Carbon Corp., Madison Ave. and 117th St., Cleveland 1, Ohio.
Kemlite Labs., 1819 W. Grand Ave., Chicago 22, Ill.
Kemode Mfg. Co., Inc., 161 W. 18th St., New York 11, N. Y.
Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass.
Kennedy & Co., D. S., Cohasset, Mass.
Kent Co., F. C., 64 Howard St., Irvington, N. J.
Kenwood Engineering Co., Inc., 265 Colfax Ave., Kenilworth, N. J.
Kenyon Transformer Co., Inc., 840 Barry St., New York 59, N. Y.
Kepco Labs. Inc., 131-38 Sanford Ave., Flushing 55, N. Y.
Kester Solder Co., 4212 Wrightwood Ave., Chicago 39, Ill.
Ketay Mfg. Corp., 555 Broadway, New York 12, N. Y.
Keuffel & Esser Co., Hoboken, N. J.
Keystone Bolt & Nut Corp., 127 Church St., New York 7, N. Y.
Keystone Carbon Co., Inc., Saint Marys, Pa.
Keystone Electronics Co., 114 Manhattan St., Stamford, Conn.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
Keystone Products Co., 904-6 23rd St., Union City, N. J.
Kiddle & Co., Inc., Walter, 477 Main St., Belleville 9, N. J.
Kinexin Instrument Co., Inc., 902 Broadway, New York 10, N. Y.
King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
King Laboratories Inc., 127 Solar St., Syracuse 4, N. Y.
Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N. Y.
Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
Kingsley Mfg. Co., Berkeley, Calif.
Kinney Mfg. Co., 3529 Washington St., Boston, Mass.
Kirchberger & Co., Inc., M., 1425 Thirty Seventh St., Brooklyn 18, N. Y.
Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
Kirkland Co., H. R., 8 King St., Morristown, N. J.
Klein-Electronics, Leo, 2404 S. La Brea Ave., Los Angeles 16, Calif.

Klein & Sons, Mathias, 3200 Belmont Ave., Chicago 18, Ill.
Klincher Locknut Corp., 2153 Hillside Ave., Indianapolis, Ind.
Kling Metal Spinning Co., 174 Centre Street, New York 13, N. Y.
Klipsch & Associates, Hope, Ark.
Knights Co., James, 131 S. Wells St., Sandwich, Ill.
Kobayashi Tool Co., 1535 N. Dayton Ave., Chicago 22, Ill.
Koh-I-Noor Pencil Co., Bloomsbury, N. J.
Koled Kords, Inc., Box K, New Haven 14, Conn.
Koliman Show Case Corp., Fort Wayne 1, Ind.
Kollman Instrument Corp., 80-08 45th Ave., Elmhurst, N. Y.
Koltan Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.
Kotron Rectifier Corp., 175 Murray St., Newark, N. J.
Krengle Mfg. Co., Inc., 227 Fulton St., New York, N. Y.
Krohn-Hite Instrument Co., 580 Massachusetts Ave., Cambridge 39, Mass.
Kuhn & Jacob Molding & Tool Co., 1200 Southard St., Trenton, N. J.
Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.
Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1, Ohio.
Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. J.
Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4, Calif.

L. A. B. Corporation, 31 Union Place, Summit, N. J.
L & O Research & Development Corp., 315 S. 15th St., Philadelphia 2, Pa.
Laboratoire Industriel de Physique Applique, 67 Rue M.A. Colombier, Bagnole (Seine), France.
Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
Laconia Corp., 37 S. 6th St., Newark 7, N. J.
Lambda Electronics Corp., 103-02 Northern Blvd., Corona, N. Y.
La Motte Chemical Products Co., Towson 4, Baltimore, Md.
Lampkin Laboratories, Inc., Bradenton 1, Fla.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
Land-Air, Inc., 440 W. Superior St., Chicago 10, Ill.
Landis & Gyr, Inc., 104 Fifth Ave., New York 36, N. Y.
Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
Lansing Sound Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.
Lansky Die Cutting Corp., 192½ Greene St., New York 12, N. Y.
LaPointe Electronics Inc., Rockville, Conn.
Lapp Insulator Co., Inc., Radio Specialties Div., 32 Gilbert St., LeRoy, N. Y.
Laughlin Co., Thomas, 199 Fore, Portland, Me.
Laurehk Radio Mfg. Co., 3931 Monroe Ave., Wayne Mich.
Lavelle Rubber Co., 424 N. Wood St., Chicago 22, Ill.
Lavoie Laboratories, Morganville, N. J.
Lawn Electronics Co., East Freehold Road, Freehold, N. J.
Leach Relay Co., 5915 Avalon Blvd., Los Angeles 3, Calif.
Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Mich.
Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
Lee Electronics Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
Lee Spring Co., Inc., 32 Main St., Brooklyn 1, N. Y.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Lehigh Structural Steel Co., 17 Battery Place, New York 4, N. Y.
Leighton Labs., H. W., 26 Herman St., Glen Ridge, N. J.
Lektra Laboratories, 154-11th Ave., New York 3 N
Leland Electric Co., The Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio.
Leland, Inc., G. H., 123 Webster St., Dayton 2, Ohio.
Lenk Mfg. Co., The, 30 Cummington St., Boston 15, Mass.
Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
Leonard Electric Products Co., Inc., 67 Thirty Fourth St., Brooklyn 32, N. Y.
Leonard Precision Products Co., Larsen Ave., Garden Grove, Calif.
Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
Leru Laboratories, Inc., 490 Black Oak Ridge Rd., R. D. 4, Paterson, N. J.
Lesia, Via Bergamo 21, Milan, Italy.
Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
Lewis Co., E. G., 11 Bragg St., East Hartford 8, Conn.
Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
Lewis & Kaufman, Ltd., P. O. Box 337, 90 El Rancho Ave., Los Gatos, Calif.

General Mills, Inc., Mechanical Div., 1620 Central Ave., Minneapolis 13, Minn.

General Motors Corp., Detroit Diesel Engine Div., Detroit, Mich.

General Photo Products Co., Inc., 15 Summit Ave., Chatham, N. J.

General Plastics Corp., 1011 Main Ave., Clifton, N. J.

General Precision Laboratory, Inc., 63 Bedford Rd., Pleasantville, N. Y.

General R-F Fittings Co., 702 Beacon St., Boston 15, Mass.

General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.

General Tire & Rubber Co., The, Akron, Ohio.

General Transformer Co., 18240 Harwood Ave., Homewood, Ill.

Georator Corp., Box 463, Manassas, Va.

George Co., P. D., 5200 N. Second St., St. Louis, Mo.

Geotronic Labs., Inc., Dallas 11, Texas.

Gerber Scientific Instrument Co., 89 Spruce St., Hartford 1, Conn.

Gerrett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.

Gering Products Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.

Germanium Products Corp., 26 Cornelison Ave., Jersey City 4, N. J.

Gertsch Products, Inc., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif.

Giannini & Co., Inc., G. M., Bin N, Pasadena, Calif.

Gibson Electric Co., 8361 Frankstown Ave., Pittsburgh 21, Pa.

Giffilan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.

Gilmore Industries, 5511 Euclid Ave., Cleveland 3, Ohio.

Girdler Corp., Thermex Div., 224 E. Broadway, Louisville 1, Ky.

Gisholt Machine Co., 1245 E. Washington Ave., Madison 3, Wis.

Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.

Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn, N. Y.

Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.

Glasscraft Co., 5210 E. Olympic Blvd., Los Angeles 22, Calif.

Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio.

Glass & Bro., Harry, 10 Van Cortlandt Ave., E., Bronx 68, N. Y.

Glass Solder Engineering, 845 El Centro St., South Pasadena, Calif.

Glastic Corp., The, 1823 E. 40th St., Cleveland 3, Ohio.

Gleason-Avery, Inc., Auburn, N. Y.

Glenco Corp., Metuchen, N. J.

Globar Division, Carborundum Co., Niagara Falls, N. Y.

Globe Industries, Inc., 125 Sunrise Place, Dayton 7, Ohio.

Globe Phone Mfg. Co., 2 Linden St., Reading, Mass.

Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.

Goat Co., Inc., Fred, 308 Dean St., Brooklyn 17, N. Y.

Goofrey Mfg. Co., 2642 S. Michigan Ave., Chicago, Ill.

Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.

Gombos Co., Inc., John, 103 Montgomery Ave., Irvington 11, N. J.

Gonset Co., 801 S. Main St., Burbank, Calif.

Good-All Electric Mfg. Co., 112 W. First St., Ogallala, Neb.

Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.

Goodmans Industries, Ltd., Axiom Works, Wembley, Middlesex, England.

Goodrich Chemical Co., B. F., Rose Bldg., 2060 E. Ninth St., Cleveland 15, Ohio.

Goodyear Aircraft Corp., 1210 Massillon Road, Dept. 65, Akron 15, Ohio.

Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.

Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.

Gorrell & Gorrell, Haworth, N. J.

Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank, Calif.

Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.

Gould Corp., Jerome F., 242 Randolph St., Brooklyn, N. Y.

Gould-National Batteries, Inc., 35 Neoga St., Depew, N. Y.

Gov-Mac Instrument Co., 22 Lawrence St., Newark 5, N. J.

Grafo Colloids Corp., Sharon, Pa.

Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, R. I.

Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.

Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.

Grant Pulley & Hardware Co., 31-85 Whitestone Pkwy., Flushing, N. Y.

Graphite Metallizing Corp., 1041 Nepperhan Ave., Yonkers 3, N. Y.

Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.

Gray Radio Co., 501 Forest Hill Blvd., West Palm Beach, Fla.

Gray Research & Development Co., Inc., 658 Hilliard St., Manchester, Conn.

Grayburne Corp., 4-6 Radford Place, Yonkers, N. Y.

Grayhill, 537 Hillgrove Ave., La Grange, Ill.

Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill.

Green Electric Co., W., 130 Cedar St., New York, N. Y.

Green Instrument Co., 363A Putnam Ave., Cambridge, Mass.

Greenwood Packaging Supply Co., 859 Summer Ave., Newark, N. J.

Gries Reproducer Corp., 100 Willow Ave., New York 54, N. Y.

Grieve-Hendry Co., 1815 W. Lake St., Chicago 12, Ill.

Griffin Co., John, 2157 James Ave., St. Paul 5, Minn.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

Groov-Pin Corp., 1125 Hendricks Causeway, Ridgefield, N. J.

Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, Ill.

Gudebrod Bros. Silk Co., Inc., Electronics Div., 225 W. 34th St., New York 1, N. Y.

Gudeman Co., 340 W. Huron St., Chicago 10, Ill.

Gulton Mfg. Corp., Metuchen, N. J.

Guthman, Inc., Edwin I., 15 S. Throop St., Chicago, Ill.

Gyromechanisms, Inc., Halesite, N. Y.

Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.

Hagen Mfg. Co., Inc., Baraboo, Wis.

Haley Electronics Co., 57 William St., New York 5, N. Y.

Haldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill.

Hallett Mfg. Co., 1601 Florence Ave., Inglewood, Calif.

Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.

Haloid Co., The, 6 Haloid St., Rochester, N. Y.

Halowax Products Division, Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Hamilton Watch Co., Precision Services Div., Lancaster 5, Pa.

Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.

Handy & Harman, 82 Fulton St., New York 38, N. Y.

Hanover Developments, 401 E. 74th St., New York 21, N. Y.

Hanovia Chemical & Mfg. Co., 233 N. J. R.R. Ave., Newark, N. J.

Hansell, Inc., U., The, Westerly, R. I.

Hansen Mfg. Co., Inc., Princeton, Indiana.

Harder Co., Donald C., 3338 India St., San Diego 1, Calif.

Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.

Hardwick Hindle, Inc., 40 Hermon St., Newark 5, N. J.

Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.

Harper Co., The, H. M., 8200 Lehigh Ave., Morton Grove, Ill.

Harper Electric Furnace Corp., 39E-River St., Buffalo 2, N. Y.

Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.

Hart Moisture Gauges, Inc., 126 Liberty St., New York 6, N. Y.

Hartford City Paper Co., Hartford City, Ind.

Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.

Harvey Hubbell, Inc., State St. & Bostwick Ave., Bridgeport 2, Conn.

Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.

Hassall, Inc., John, Clay and Oakland Sts., Brooklyn 22, N. Y.

Hastings Instrument Co., Inc., Hampton 9, Va.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Hauman Instruments Co., 70 Coolidge Rd., Watertown 72, Mass.

Hawley Products Co., St. Charles, Ill.

Hayden Mfg. Co., 173 N. Peoria, Chicago 7, Ill.

Haydon Co., A. W., The, 232 N. Elm St., Waterbury 20, Conn.

Haydon Mfg. Co., Inc., 584 E. Elm St., Torrington, Conn.

Haydon Switch Co., 232 N. Elm St., Waterbury, Conn.

Haydu Brothers, Plainfield, N. J.

Haynes Stellite Co., Division of Union Carbide & Carbon Corp., Kokomo, Ind.

Hazard Insulated Wire Works Div., The Okonite Co., Wilkes-Barre, Pa.

Heath Co., Benton Harbor, Mich.

Heiland Research Corp., 130 E. 5th Ave., Denver 9, Colo.

Heinemann Electric Co., 97 Plum St., Trenton 2, N. J.

Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.

Heinze Electric Co., 685 Lawrence St., Lowell, Mass.

Heldor Mfg. Co., Div. of Heldor Bushing & Terminal Co., Inc., 225 Belleville Ave., Bloomfield, N. J.

Heli-Coil Corp., Shelter Rock Rd., Danbury, Conn.

Helipot Corp., 916 Meridian Ave., South Pasadena, Calif.

Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.

Heminway & Bartlett Mfg. Co., 500 Fifth Ave., New York 36, N. Y.

Henkel-Clauss Co., Fremont, Ohio.

Heppner Mfg. Co., P. O. Box 612, Round Lake, Ill.

Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.

Herlec Corp., The, 422 N. Fifth St., Milwaukee 3, Wis.

Hermascol Co., The, Riverside Drive, Elkhart, Ind.

Hermes Engraving Co., 13 University Place, New York 3, N. Y.

Hermes Plastics, Inc., 13-19 University Place, New York 3, N. Y.

Hermetic Seal Products Co., 29-37 South 6th St., Newark 7, N. J.

Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.

Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.

Hetherington, Inc., Sharon Hill, Pa.

Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.

Hexacon Electric Co., 130 W. Clay Ave., Roselle Park, N. J.

Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.

Heyman Mfg. Co., Kenilworth 2, N. J.

Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

High Speed Hammer Co., Rochester, N. Y.

High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.

Highland Engineering Co., Main St. & Urban Ave., Westbury, N. Y.

Hillburn Electronic Products Co., 55 Nassau Ave., Brooklyn 22, N. Y.

Hillyer Instrument Co., Inc., 54 Lafayette St., New York 13, N. Y.

Hinckley Technical Associates, Inc., 75 Orchard St., Belmont 78, Mass.

Hinde & Dauch, Sandusky, Ohio.

Hindle Transformer Co., Inc., Flemington, N. J.

Hi-Q Division, Aerovox Corp., Seneca Ave., Olean, N. Y.

Hitem Wires, Inc., 26 Windsor Ave., Mineola, N. Y.

Hi-Test Chemical Corp., 722 64th St., Brooklyn 20, N. Y.

Hivolt Ltd., 34A Pottery Lane, London W. 11, England.

Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.

Hobson Brothers, 4049 W. Fullerton St., Chicago 39, Ill.

Hoffman Engineering Corp., Anoka, Minn.

Hoffman Radio Corp., 3716 S. Hill Street, Los Angeles 7, Calif.

Hofmann Corp., C. L., 643 Liberty Ave., Pittsburgh 22, Pa.

Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.

Holl Audio Inc., 5014 N. Encinta Ave., Temple City, Calif.

Holliston Mills, Inc., Norwood, Mass.

Holtzer-Cabot, Div. of National Pneumatic Co., Inc., 125 Amory St., Boston 19, Mass.

Holub Industries, Inc., 414 DeKalb Ave., Sycamore, Ill.

Holyoke Wire & Cable Co., Holyoke, Mass.

Home Recording Products Corp., Freeport, N. Y.

Homelite Corp., Port Chester, N. Y.

Hopkins Engineering Co., 2082 Lincoln Ave., Altadena, Calif.

Hopp Press, Inc., 460 W. 34th St., New York, N. Y.

Hopwood Retinning Co., Inc., 198 Pacific Ave., Jersey City, N. J.

Hopwood Retinning Corp., 303 Commercial St., Malden, Mass.

Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.

Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

Houlihan Company, T. J., 2508-14 W. Lawrence Avenue, Chicago 25, Ill.

Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke, Mich.

Howard Industries, Inc., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis.

Huck Mfg. Co., Detroit, Mich.

Hudson Lamp Co., 528 Elm St., Arlington, N. J.

Hudson Tool & Die Co., Inc., 118 S. 14th St., Newark, N. J.

Hudson Wire Co., Ossining, N. Y.

Hufco Industries, 2815 W. Olive, Burbank, Calif.

Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.

Hughes Aircraft Co., Florence Ave. at Teale St., Culver City, Calif.

Hughey & Phillips, P. O. Box 686, Encino, Calif.

Hunt Corp., The, 453 Lincoln St., Carlisle, Pa.

Hunter Spring Co., 21 Spring Ave., Lansdale, Pa.

Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago 37, Ill.

Huse Liberty Mica Co., 171 Camden St., Boston, Mass.

Hycor Mfg. Co., 2961 E. Colorado St., Pasadena, Calif.

Hycor Company, Inc., 11423 Vanowen St., North Hollywood, Calif.

Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.

Hy-Lite Antennae, Inc., 242 E. 137th St., New York 51, N. Y.

Hytron Radio & Electronics Co., A Division of Columbia Broadcasting System, Inc., 76 Lafayette St., Salem, Mass.

I. D. E. A., 7900 Pendleton Pike, Indianapolis 26, Ind.

I. E. Manufacturing, 325 N. Hoyne Ave., Chicago 12, Ill.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.

Ideal Industries, Inc., 5103 Park & Borden Avenues, Sycamore, Ill.

Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.

Illinois Condenser Co., 1616 N. Throop St., Chicago 22, Ill.

Illinois Electric Porcelain Co., Macomb, Ill.

Illinois Testing Labs., Inc., 420 N. La Salle Street, Chicago 10, Ill.

Illinois Wood Products Corp., 1656 N. Besly Court, Chicago 22, Ill.

IlSCO Copper Tube & Products, Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio.

Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.

Imtra Corp., 58 Charles St., Cambridge 41, Mass.

Indiana Steel Products Company, The, Valparaiso, Indiana.

Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.

Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y.

Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill.

Industrial Control Co., Straight Path & Arlington Ave., Wyandanch, N. Y.

Industrial Devices Inc., 22 State Rd., Edgewater, N. J.

Industrial Electrical Works, 1509 Chicago St., Omaha 2, Nebraska.

Industrial Electronics Co., Inc., Hanover, Mass.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Industrial Hardware Mfg. Co., Inc., 109 Prince St., New York, N. Y.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
 Industrial Mica Corp., 223 S. Van Brunt St., Englewood, N. J.
 Industrial Products Co., Danbury, Conn.
 Industrial Rectifier Co., 120 Cedar St., New York, N. Y.
 Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, Ill.
 Industrial Retaining Ring Co., 8 W. Sidney Ave., Mount Vernon, N. Y.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
 Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.
 Industrial Television, Inc., 359 Lexington Ave., Clifton, N. J.
 Industrial Test Equipment Co., 55 E. 11th St., New York 3, N. Y.
 Industrial Timer Corp., 115 Edison Place, Newark 5, N. J.
 Industrial Transformer Co., Gouldsboro, Pa.
 Inet, Inc., 8655 S. Main St., Los Angeles 3, Calif.
 Ingraham Co., E., Bristol, Conn.
 Insi-X Co., Inc., Water St., Ossining, N. Y.
 Instron Engineering Corp., 2 Hancock St., Quincy 71, Mass.
 Instrument Corp. of America, Blacksburg, Va.
 Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
 Instrument Electronics Corp., 90 Main St., Port Washington, N. Y.
 Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
 Instrument Parts Corp., P. O. Box 150, Ossining, N. Y.
 Instrument Resistors Co., 1036 Commerce Ave., Union, N. J.
 Instrument Specialties Co., Inc., 254 Bergen Blvd., Little Falls, N. J.
 Instrument Wire Co., Guilford, Conn.
 Instruments Components, Inc., 1834 Franklin St., Santa Monica, Calif.
 Insulative Co., 1 Broadway, New York, N. Y.
 Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulating Tube Co., 26 Cottage St., P. O. Box 1, Poughkeepsie, N. Y.
 Insulation Mfg. Co., 11 New York Ave., Brooklyn, N. Y.
 Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
 Insuline Corp. of America, 36-02 35th Avenue, Long Island City, N. Y.
 Integrated Mica Corp., 202 Franklin Place, Woodmere, N. Y.
 Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.
 International Electronics Corp., 137 Hudson St., New York 13, N. Y.
 International Instruments, Inc., P. O. Box 2954, New Haven 15, Conn.
 International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
 International Pump & Machine Works, 11-13 Governor St., Newark 2, N. J.
 International Radiant Corp., 40 Matinecock Ave., Port Washington, N. Y.
 International Rectifier Corp., 1521 E. Grand Ave., El Segundo, Calif.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.
 International Television Corp., 238 William St., New York 38, N. Y.
 Investment Casting Co., 319 Chestnut St., Newark 5, N. J.
 Ippolito & Co., Inc., James, 401 Concord Ave., Bronx 54, N. Y.
 Irvington Varnish & Insulator Co., 6 Argyle Terrace, Irvington 11, N. J.
 Isolantite Mfg. Corp., Stirling, N. J.

J-B-L Instrument Co., Sycamore & Mill Rds., Clifton Heights, Pa.
 J-B-T Instruments, Inc., 431 Chapel St., New Haven 8, N. Y.
 J F D Mfg. Co., Inc., 6101-23 Sixteenth Ave., Brooklyn, N. Y.
 Jack & Heintz, Inc., Cleveland 1, Ohio.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
 Jacobs Instrument Co., 4718 Bathesda Ave., Bathesda, Md.
 Jacobson Mfg. Co., Inc., Kenilworth 2, N. J.
 Jaen Electromotive Corp., 10-02 44th Drive, Long Island City, N. Y.
 James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18, Ill.
 Jan Hardware Mfg. Co., Inc., 25-30 163rd St., Flushing 58, N. Y.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Janette Mfg. Co., Morton Grove, Illinois.
 Jarrel-Ash Co., 165 Newberry St., Boston 16, Mass.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Javex, P. O. Box 646, Redlands, Calif.
 Jeffers Electronics Div. of Speer Carbon Co., Du Bois, Pa.

Jefferson Electric Co., Bellwood, Ill.
 Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y.
 Jelliff Mfg. Corp., C. O., 200 Pequot Ave., Southport, Conn.
 Jem-O-Matic, Inc., 530 Cherry Lane, New Hyde Park, N. Y.
 Jen Products, Inc., 419 W. 42nd St., New York, N. Y.
 Jennings Radio Mfg. Co., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif.
 Jensen Industries Inc., 329 S. Wood St., Chicago, Ill.
 Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 Jersey Specialty Co., Little Falls, N. J.
 Jiffy Clip Mfg. Co., 128 Clinton Ave., Huntington, N. Y.
 Jobbins Electronic Enterprises, Menlo Park, Calif.
 Johnson Mfg. Co., Boonton, N. J.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.
 Johnson Co., E. F., Waseca, Minn.
 Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
 Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
 Johnson-Williams, Ltd., 2526 3rd St., Palo Alto, Calif.
 Johnston Foil Mfg. Co., 6100 S. Broadway, St. Louis 11, Mo.
 Jones Electronics Co., M. C., 96 N. Main St., Bristol, Conn.
 Jones Div., Howard B., Cinch Mfg. Corp., 1026 S. Homan Ave., Chicago 24, Ill.
 Jordan Electronic Mfg. Co., Inc., Union Bldg., 119 E. Union St., Pasadena 1, Calif.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Joy Mfg. Corp., Oliver Bldg., Pittsburgh 22, Pa.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 K. F. Development Co., 867 Woodside Way, San Mateo, Calif.
 K-V Transformer Corp., Danbury, Conn.
 Kaar Engineering Co., 2995 Middlefield Road, P. O. Box 1320, Palo Alto, Calif.
 Kahle Engineering Co., 1350 Seventh St., North Bergen, N. J.
 Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.
 Kalbfed Labs., Inc., 1090 Morena Blvd., San Diego 10, Calif.
 Kanthal Corp., Amelia Place, Stamford, Conn.
 Karp Metal Products Co., Div. of H & B Machine Co., 215 63rd St., Brooklyn 20, N. Y.
 Kartron, Inc., Drawer 472, Huntington Beach, Calif.
 Kato Engineering Co., 1415 First Ave., Mankato, Minn.
 Kaupp & Sons, C. B., 32 Newark Way, Maplewood, N. J.
 Kay Electric Co., 25 Maple Ave., Pine Brook, N. J.
 Kaye-Halbert Corp., 3555 Hayden Ave., Culver City, Calif.
 Kearfott Co., Inc., 1150 McBride Ave., Little Falls, N. J.
 Keasbey & Mattison, Ambler, Pa.
 Keithley Instruments, 3868 Carnegie Ave., Cleveland 15, Ohio.
 Keller Products Co., 41 Union St., Manchester, N. H.
 Kellogg Co., M. W., P. O. Box 469, Jersey City 3, N. J.
 Kellogg Switchboard & Supply Co., 6650 S. Cicero Ave., Chicago 38, Ill.
 Kelnor Mfg. Corp., 222 Kearny St., San Francisco 8, Calif.
 Kemet Co., A Div. of Union-Carbide & Carbon Corp., Madison Ave. and 117th St., Cleveland 1, Ohio.
 Kemlite Labs., 1819 W. Grand Ave., Chicago 22, Ill.
 Kemode Mfg. Co., Inc., 161 W. 18th St., New York 11, N. Y.
 Kemtron Electron Products, Inc., 23 Brown St., Salem, Mass.
 Kennedy & Co., D. S., Cohasset, Mass.
 Kent Co., F. C., 64 Howard St., Irvington, N. J.
 Kenwood Engineering Co., Inc., 265 Colfax Ave., Kenilworth, N. J.
 Kenyon Transformer Co., Inc., 840 Barry St., New York 59, N. Y.
 Kepco Labs. Inc., 131-38 Sanford Ave., Flushing 55, N. Y.
 Kester Solder Co., 4212 Wrightwood Ave., Chicago 39, Ill.
 Ketay Mfg. Corp., 555 Broadway, New York 12, N. Y.
 Keuffel & Esser Co., Hoboken, N. J.
 Keystone Bolt & Nut Corp., 127 Church St., New York 7, N. Y.
 Keystone Carbon Co., Inc., Saint Marys, Pa.
 Keystone Electronics Co., 114 Manhattan St., Stamford, Conn.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Keystone Products Co., 904-6 23rd St., Union City, N. J.
 Kidde & Co., Inc., Walter, 477 Main St., Belleville 9, N. J.
 Kinetix Instrument Co., Inc., 902 Broadway, New York 10, N. Y.
 King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
 King Laboratories Inc., 127 Solar St., Syracuse 4, N. Y.
 Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N. Y.
 Kings Microwave Co., Inc., 719 Main St., New Rochelle, N. Y.
 Kingsley Mfg. Co., Berkeley, Calif.
 Kinney Mfg. Co., 3529 Washington St., Boston, Mass.
 Kirchberger & Co., Inc., M., 1425 Thirty Seventh St., Brooklyn 18, N. Y.
 Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 Kirkland Co., H. R., 8 King St., Morristown, N. J.
 Klein-Electronics, Leo, 2404 S. La Brea Ave., Los Angeles 16, Calif.

Klein & Sons, Mathias, 3200 Belmont Ave., Chicago 18, Ill.
 Klincher Locknut Corp., 2153 Hillside Ave., Indianapolis, Ind.
 Kling Metal Spinning Co., 174 Centre Street, New York 13, N. Y.
 Klipsch & Associates, Hope, Ark.
 Knights Co., James, 131 S. Wells St., Sandwich, Ill.
 Kobzy Tool Co., 1535 N. Dayton Ave., Chicago 22, Ill.
 Koh-I-Noor Pencil Co., Bloomsbury, N. J.
 Koiled Kords, Inc., Box K, New Haven 14, Conn.
 Kollman Show Case Corp., Fort Wayne 1, Ind.
 Kollman Instrument Corp., 80-08 45th Ave., Elmhurst, N. Y.
 Koltan Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
 Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.
 Kotron Rectifier Corp., 175 Murray St., Newark, N. J.
 Krengle Mfg. Co., Inc., 227 Fulton St., New York, N. Y.
 Krohn-Hite Instrument Co., 580 Massachusetts Ave., Cambridge 39, Mass.
 Kuhn & Jacob Molding & Tool Co., 1200 Southard St., Trenton, N. J.
 Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
 Kulka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.
 Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.
 Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.
 Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1, Ohio.
 Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. J.
 Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4, Calif.
 L. A. B. Corporation, 31 Union Place, Summit, N. J.
 L & O Research & Development Corp., 315 S. 15th St., Philadelphia 2, Pa.
 Laboratoire Industriel de Physique Applique, 67 Rue M.A. Colombier, Bagnolet (Seine), France.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Lambda Electronics Corp., 103-02 Northern Blvd., Corona, N. Y.
 La Motte Chemical Products Co., Towson 4, Baltimore, Md.
 Lampkin Laboratories, Inc., Bradenton 1, Fla.
 Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
 Land-Air, Inc., 440 W. Superior St., Chicago 10, Ill.
 Landis & Gyr, Inc., 104 Fifth Ave., New York 36, N. Y.
 Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.
 Lansing Sound Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.
 Lansky Die Cutting Corp., 192½ Greene St., New York 12, N. Y.
 LaPointe Electronics Inc., Rockville, Conn.
 Lapp Insulator Co., Inc., Radio Specialties Div., 32 Gilbert St., LeRoy, N. Y.
 Laughlin Co., Thomas, 199 Fore, Portland, Me.
 Lauehik Radio Mfg. Co., 3931 Monroe Ave., Wayne Mich.
 Lavelle Rubber Co., 424 N. Wood St., Chicago 22, Ill.
 Lavoie Laboratories, Morganville, N. J.
 Lawn Electronics Co., East Freehold Road, Freehold, N. J.
 Leach Relay Co., 5915 Avalon Blvd., Los Angeles 3, Calif.
 Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Mich.
 Lectrohlm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
 Lee Electronics Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 Lee Spring Co., Inc., 32 Main St., Brooklyn 1, N. Y.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Lehigh Structural Steel Co., 17 Battery Place, New York 4, N. Y.
 Leighton Labs., H. W., 26 Herman St., Glen Ridge, N. J.
 Lektra Laboratories, 154-11th Ave., New York 3 N
 Leland Electric Co., The, Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio.
 Leland, Inc., G. H., 123 Webster St., Dayton 2, Ohio.
 Lenk Mfg. Co., The, 30 Cummington St., Boston 15, Mass.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Leonard Electric Products Co., Inc., 67 Thirty Fourth St., Brooklyn 32, N. Y.
 Leonard Precision Products Co., Larsen Ave., Garden Grove, Calif.
 Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
 Lerner Instrument & Electronics Mfg. Corp., GPO Box 620, Brooklyn 1, N. Y.
 Leru Laboratories, Inc., 490 Black Oak Ridge Rd., R. D. 4, Paterson, N. J.
 Lesa, Via Bergamo 21, Milan, Italy.
 Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
 Lewis Co., E. B., 11 Bragg St., East Hartford 8, Conn.
 Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.
 Lewis & Kaufman, Ltd., P. O. Box 337, 90 El Rancho Ave., Los Gatos, Calif.

Lewis Spring & Mfg. Corp., 2646 W. North Ave., Chicago 47, Ill.

Liberty Mirror Div., Libbey-Owens-Ford Glass Co., Brackenridge, Pa.

Librascope, Inc., 1607 Flower St., Glendale 1, Calif.

Liebel-Harsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.

Lindberg Engineering Co., 2450 W. Hubbard St., Chicago, Ill.

Linde Air Products Co., Division of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Lindgren Screen Room, 4515 N. Ravenswood Ave., Chicago 40, Ill.

Lindsay Structure, Inc., 5000 W. Dempster St., Skokie, Ill.

Linear Equipment Labs., Brightwater Place, Massapequa, N. Y.

Lingo & Son, Inc., John E., 28th St. and Buren, Camden, N. J.

Linick Chemical Co., 59 E. Madison St., Chicago 2, Ill.

Lion Fastener, Inc., Honeoye Falls, N. Y.

Lipps, E. A., 5485 W. Washington Blvd., Los Angeles, Calif.

Liston-Becker Instrument Co., Inc., 649 Hope St., Springfield, Stamford, Conn.

Littelfuse Inc., Des Plaines, Ill.

Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.

Little, Inc., Arthur D., Cambridge, Mass.

Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.

Locke, Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.

Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.

London Chemical Co., 325 W. 32nd St., Chicago 16, Ill.

Lord Mfg. Co., 1635 W. 12th St., Erie, Pa.

Louis Bros., 3543 E. 16th St., Los Angeles 23, Calif.

Louthan Mfg. Co., East Liverpool, Ohio.

Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln St., Lowell, Mass.

Luhrs & Co., C. H., 297 Hudson St., Hackensack, N. J.

Lukens Steel Co. & Divisions, By-Products Steel Co. & Lukenweld, 447 Lukens Bldg., Coatesville, Pa.

Luma Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio.

Lumenite Electric Co., 407 J. Dearborn St., Chicago 5, Ill.

Lundey Associates, 694 Main St., Waltham 54, Mass.

Luther Electronic Mfg. Co., 5767 W. Adams Blvd., Los Angeles, Calif.

Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.

Lydon Bros., Hackensack, N. J.

Lyman Electronic Corp., 12 Cass St., Springfield, Mass.

Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.

Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.

Lynn Electronic Research Co., #9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif.

Lysco Mfg. Co., 82 Herman St., East Rutherford, N. J.

MB Mfg. Co., 1060 State St., New Haven 11, Conn.

MP Engineering Co., Fairfield 3, Conn.

M-W Laboratories, 1824 N. Milwaukee Ave., Chicago 27, Ill.

McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.

McCormick-Selph Associates, Palo Alto Airport, Palo Alto, Calif.

McCoy Electronics Co., Mount Holly Springs, Pa.

McElroy Mfg. Corp., Littleton, Mass.

McIntosh Engineering Laboratory, Inc., 320 Water St., Binghamton, N. Y.

McLaughlin, J. L. A., P. O. Box 529, La Jolla, Calif.

McLean Engineering Laboratories, Princeton, N. J.

McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.

Maas & Waldstein Co., 2121 McCarter Highway, Newark 4, N. J.

Macdonald Co., Inc., W. S., 33 University Rd., Cambridge 38, Mass.

Machine-O-Matic, Inc., P. O. Box 238, Ashley, Ohio.

Machlett Laboratories, Inc., Springfield, Conn.

Mack Electric Devices Inc., 43 Glenside Ave., Wyncote, Pa.

MacKay Laboratories, 1946 N. Kedzie, Chicago 47, Ill.

MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.

Magna Driver Corp., 779 Washington St., Buffalo 3, N. Y.

Magna Electronics Co., 9810 Anza Ave., P. O. Box 338, Inglewood, Calif.

Magnaflux Corp., 5900 Northwest Hwy., Chicago 31, Ill.

Magnasyn Mfg. Co., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.

Magnatran, Inc., 248 Schuyler Ave., Kearny, N. J.

Magnavox Co., The Components Div., Fort Wayne 4, Ind.

Magnecord, Inc., 225 W. Ohio St., Chicago 10, Ill.

Magnecraft Electric Co., 1450 W. Van Buren St., Chicago 7, Ill.

Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.

Magnetic Amplifiers, Inc., 632 Tinton Ave., New York 55, N. Y.

Magnetic Analysis Corp., 42-44 Twelfth St., Long Island City 1, N. Y.

Magnetic Core Corp., 2 Croton Ave., Ossining, N. Y.

Magnetic Devices, Inc., 712 East St., Frederick, Md.

Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.

Magnetic Powders Inc., 1000 Fairview Ave., Johnsonburg, Pa.

Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.

Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa.

Magnetics, Inc., Box 230-E, Butler, Pa.

Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.

Maico Co. Inc., 21 North 3rd St., Minneapolis, Minn.

Maida Development Co., 12 E. Howard St., Phoenix, Va.

Makepeace Co., D. E., Attleboro, Mass.

Malco Tool & Mfg. Co., 4025 W. Lake St., Chicago 24, Ill.

Mallinckrodt Chemical Works, Second and Mallinckrodt Sts., St. Louis 7, Mo.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Mandex Corp., 2608 W. 16th St., Chicago 8, Ill.

Manning, Maxwell & Moore, Inc., Stratford, Conn.

Mansol Ceramics, 13 Valley St., Belleville, N. J.

Manson Laboratories, 207 Greenwich Ave., Stamford, Conn.

Manufacturers Engineering & Equipment Corp., York & Mill Rds., Hatboro, Pa.

Marathon Battery Co., Wausau, Wis.

Marathon Electric Mfg. Corp., Randolph & Cherry Sts., Wausau, Wis.

Marblette Corp., 37-21 30th St., Long Island City, N. Y.

Marbon Corp., Gary, Ind.

Marco Industries Co., 207 S. Helena St., Anaheim, Calif.

Marconi Instruments, Ltd., 23 Beaver St., New York 4, N. Y.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Marion Electrical Instrument Co., 402 Canal St., Manchester, N. H.

Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.

Markel & Sons, L. Frank, School House Lane, Norristown, Pa.

Markem Machine Co., Keene, N. H.

Markite Corp., 155 Waverly Place, New York 14, N. Y.

Marma Electronic Co., 703 Willow St., Chicago 14, Ill.

Marsh Stencil Machine Co., 46 Marsh Bldg., Belleville, Ill.

Marshall Associates, Inc., John, Box 2463, Bridgeport 8, Conn.

Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.

Markwik Mfg. Co., Inc., 2270 Bruckner Blvd., Bronx 61, N. Y.

Maryland Electronic Mfg. Corp., College Park, Md.

Maryland Lava Co., Bel Air, Md.

Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.

Masonite Corp., 111 W. Washington St., Chicago 2, Ill.

Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.

Mast Development Co., Davenport, Ohio.

Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.

Matthews & Co., James H., 470 Atlantic Ave., Boston 10, Mass.

Mattison Television & Radio Corp., 10 W. 181st St., New York 53, N. Y.

Maurer Inc., J. A., 37-01 31st St., Long Island City, N. Y.

Maxson Corp., W. L., 460 W. 34th St., New York 1, N. Y.

May Co., Donald M., 6055 Lankershim Blvd., North Hollywood, Calif.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

Measurements Corp., Boonton, N. J.

Meck TV, Inc., 1020 Rush St., Chicago 11, Ill.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Melody Master Mfg. Co., 2106 Berwyn Ave., Chicago 25, Ill.

Melpar, Inc., 452 Swann Ave., Alexandria, Va.

Mendelsohn Speedgun Co., Inc., 457 Bloomfield Ave., Bloomfield, N. J.

Menlo Research Laboratory, Menlo Park, Calif.

Mepeco, Inc., 35-37 Abnett Ave., Morristown, N. J.

Mercoid Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.

Mercury Contacts, Inc., Box 615-E, Far Hills Station, Dayton 9, Ohio.

Mercury Electronic Co., Box 450, Red Bank, N. J.

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.

Merit Plating Co., 218 E. 141st St., New York 51, N. Y.

Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.

Metal Hydrides, Inc., Beverly, Mass.

Metal Textile Corp., 647 E. First Ave., Roselle, N. J.

Metalcraft, Inc., 86-08 130th St., Richmond Hill 18, N. Y.

Metals & Controls Corp., General Plate Div., Attleboro, Mass.

Metaplast Process Inc., 9-17 37th Ave., Long Island City 1, N. Y.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

Method Mfg. Corp., 2021 W. Churchill St., Chicago 47, Ill.

Metpro, Inc., R. I., 230 Toronto Ave., Providence, R. I.

Metron Instrument Co., 432 Lincoln St., Denver 9, Colorado.

Metropolitan Electronics & Instruments Co., 106 Fifth Ave., New York 11, N. Y.

Metz Refining Co., 369 Mulberry St., Newark 2, N. J.

Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.

Mica Insulator Co., Schenectady 1, N. Y.

Micacraft Products Inc., 703 McCarter Highway, Newark 5, N. J.

Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y.

Micarta Fabricators, Inc., 5324 Ravenswood Avenue, Chicago 40, Illinois.

Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.

Michigan Steel Casting Co., Microstat Div., Detroit, Mich.

Mico Instrument Co., 77 Trowbridge St., Cambridge 38, Mass.

Micro Balancing, Inc., 191 Herricks Rd., Garden City Park, N. Y.

Micro-Circuits Co., New Buffalo, Mich.

Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.

Microlab, 301 S. Ridgewood Rd., South Orange, N. J.

Micromax Co., 1964 Utica Ave., Brooklyn, N. Y.

Micro Switch Division of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.

Microtone Co., Ford Parkway on the Mississippi, St. Paul 5, Minn.

Microwave Associates, Inc., 22 Cummington St., Boston 15, Mass.

Midco Mfg. & Distributing Co., Inc., 1129 S. 13th St., Sheboygan, Wis.

Midland Industrial Finishes Co., Waukegan, Ill.

Midland Mfg. Co., Sunshine & Fiberglass, Kansas City, Kansas.

Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.

Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, Ill.

Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.

Midwest Radio & Television Corp., 909 Broadway, Cincinnati 2, Ohio.

Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, Ill.

Midwestern Geophysical Laboratory, 3440 S. Harvard, Tulsa, Okla.

Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.

Milford Rivet & Machine Co., Milford, Conn.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Millen Mfg. Co., 90 Summit Ave., Brookline, Mass.

Miller Labs., August E., 9226 Hudson Blvd., North Bergen, N. J.

Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.

Miller Corp., William, 325 N. Halstead St., Pasadena 8, Calif.

Miller Mfg. Co., M. A., 1169 E. 43rd St., Chicago 15, Ill.

Miller Research Laboratories, 5529 S. Fifth St., Milwaukee 7, Wis.

Miller TV Antenna Co., 2840 Naomi, Burbank, Calif.

Millers Falls Co., Greenfield, Mass.

Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.

Milwaukee Resistor Co., 700 W. Virginia St., Milwaukee 4, Wis.

Milwaukee Stamping Co., 800 S. 72nd St., Milwaukee, Wis.

Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wis.

Miniature Precision Bearings, Inc., Keene, New Hampshire.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Avenue S., Minneapolis, Minn.

Minneapolis-Honeywell Regulator Co., Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa.

Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.

Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.

Minnesota Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.

Minor Rubber Co., 49 Ackerman St., Bloomfield, N. J.

Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.

Miskella Infra-Red Co., The, E. 73rd & Grand Ave., Cleveland 4, Ohio.

Mission-Western Engineers, Inc., 132-134 W. Colorado St., Pasadena 1, Calif.

Missouri Research Labs., 2109 Locust St., St. Louis 3, Mo.

Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.

Mitchell Rand Insulation Co., Inc., 51 Murray Street, New York 7, N. Y.

Model Engineering & Mfg. Inc., Huntington, Ind.

Model Rectifier Corp., 557 Roggers Ave., Brooklyn 25, N. Y.

Modelectric Products Corp., 1500 Bangs Ave., Asbury Park, N. J.

Modern-Aire Mfg. Co., 4436 W. Roosevelt Rd., Chicago 24, Ill.

Modern Hearing Aids Laboratory, The, 6805 Fraser St., Vancouver, B. C., Canada.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Molded Products Co., Inc., 2820 N. Sylvania St., Fort Worth, Texas.

Mole-Richardson Co., 937 N. Sycamore Ave., Hollywood 38, Calif.

Moloney Electric Co., 5590 Bircher Blvd., St. Louis 20, Mo.

Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.

Monsanto Chemical Co., Plastics Div., Springfield, Mass.

Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.

Moody Machine Products Co., Inc., 53 Dudley St., Providence 5, R. I.

Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y.

Mooradian High Frequency Labs., 13 E. Fort Lee Rd., Bogota, N. J.

Moore Co., Howard J., 266 Willam St., New York 38, N. Y.

- Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
- Moseley, Francis L., 1325 N. Fair Oaks, Pasadena 3, Calif.
- Mosinee Paper Mills Co., Mosinee, Wisconsin.
- Motoresearch Co., 1600 Junction Ave., Racine, Wis.
- Motorola Inc., 4545 Augusta Blvd., Chicago 51, Ill.
- Moullic Specialties Co., 1005-1007 W. Washington St., Bloomington, Ill.
- Mt. Vernon Die Casting Corp., 118 Pearl St., Mt. Vernon, N. Y.
- Mt. Vernon Precision Transformer Co., 201 S. Third Ave., Mt. Vernon, N. Y.
- Moyen, C. P., 908 Chicago Ave., Chicago 22, Ill.
- Muckle Mfg. Co., Owatonna 55, Minn.
- Mucon Corp., 9 St. Francis St., Newark 5, N. J.
- Mueller Electric Co., 1583 E. 31st St., Cleveland 14, Ohio.
- Muirhead & Co., Ltd., Beckenham, Kent, England.
- Mullard Overseas Ltd., Century House, Shaftesbury Ave., London W. C. 2, England.
- Multicore Sales Corp., 164 Duane St., New York 13, N. Y.
- Multicore Solders Ltd., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshire, England.
- Multi Metal Co., 1350 Garrison Ave., New York 59, N. Y.
- Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
- Murex Ltd., Rainham-Essex-England.
- Murray American Corp., 95 Summit Ave., Summit, N. J.
- Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.
- Murphy & Miller Inc., 1322 S. Michigan Ave., Chicago 5, Ill.
- Mu Switch Div., Acro Switch Co., 38 Pequit St., Canton 31, Mass.
- Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
- Mycalex Corporation of America, Clifton Blvd., Clifton, N. J.
- Mycalex Tube Socket Corporation, Clifton Blvd., Clifton, N. J.
- Myers & Sons, Inc., E. A., 306 Beverly Road, Radioear Building, Pittsburgh 16, Pa.
- Mykroy, Inc., Wheeling, Ill.
- Mytron Mfg. Co., 4504 Brazil St., Los Angeles 39, Calif.
- N. R. K. Mfg. & Engineering Co., 4601 W. Addison St., Chicago 41, Ill.
- Naer Corp., 11777 Santa Monica Blvd., West Los Angeles 25, Calif.
- National Acme Co., 170 E. 131st St., Cleveland 8, Ohio.
- National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
- National Capacitor Co., 585 Washington St., Quincy 69, Mass.
- National Carbon Co., Division of United Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
- National Ceramic Co., 400 Southard St., Trenton 2, N. J.
- National Coil Co., P. O. Box 1237, Sheridan, Wyo.
- National Company, Inc., 61 Sherman St., Malden 48, Mass.
- National Electric Coil Co., Columbus 16, Ohio.
- National Electric Controller Co., 7070 Glenwood Ave., Chicago 26, Ill.
- National Electric Products Co., 1356 Chamber of Commerce Bldg., Pittsburgh 30, Pa.
- National Electronic Mfg. Corp., 42-08 Vernon Blvd., Long Island City 1, N. Y.
- National Electronics, Inc., Geneva, Ill.
- National Electronics Labs., Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
- National Electronics Mfg. Co., 314 W. 58th St., Los Angeles, Calif.
- National Inter-Communication Systems, Inc., 1130 N. Milwaukee Ave., Chicago 22, Ill.
- National Lead Co., 111 Broadway, New York 6, N. Y.
- National Lock Washer Co., 40 Hermon St., Newark 5, N. J.
- National Moldite Co., 1410 Chestnut Ave., Hillside 5, N. J.
- National Radiac, Inc., 10 Crawford St., Newark, N. J.
- National Research Corp., Equipment Div., 70 Memorial Drive, Cambridge 42, Mass.
- National Screw & Mfg. Co., The, Cleveland 4, Ohio.
- National Spectrographic Laboratories, Inc., 6300 Euclid Ave., Cleveland 3, Ohio.
- National Tel-Tronics Corp., 35 St. Caspary Ave., Yonkers, N. Y.
- National Union Radio Corp., 237 Jacksonville Rd., Hatboro, Pa.
- National Video Corp., 3019 W. 47th St., Chicago, Ill.
- National Vulcanized Fibre Co., Wilmington, Del.
- Natvar Corp., 211 Randolph Ave., Woodbridge, N. J.
- Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
- Nelson Vacuum Pump Co., George F., 2133 Fourth Street, Berkeley 10, Calif.
- Neomatic, Inc., 9010 Bellanca Ave., Los Angeles 45, Calif.
- Neo-Sil Corp., 26 Cornelison Ave., Jersey City 4, N. J.
- Nesor Alloy Products Co., 282 Halsey St., Newark, N. J.
- Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
- Neutronic Associates, 83-56 Vietor Ave., Elmhurst, N. Y.
- New England Electrical Works, Inc., Lisbon, N. H.
- New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
- New Hampshire Ball Bearings, Inc., Peterborough, N. H.
- New Hermes, Inc., 13-19 University Place, New York 3, N. Y.
- New Jersey Wood Finishing Co., Amboy Ave., Woodbridge, N. J.
- New Jersey Zinc Co., 160 Front St., New York 7, N. Y.
- New London Instrument Co., Box 189, New London, Conn.
- New Rochelle Tool Corp., 320 Main St., New Rochelle, N. Y.
- New York Solder Co., 684 E. 133rd St., New York 54, N. Y.
- New York Transformer Co., Inc., Third Ave., Alpha, N. J.
- Newark Spinning & Stamping Co., 472 Bloy St., Hillside 5, N. J.
- Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
- Newcomb Spring Corp., 3907 7th Ave., Brooklyn 32, N. Y.
- Ney Co., J. M., 179 Elm St., Hartford, Conn.
- Niagara Electron Laboratories, Andover, N. Y.
- Nickel Cadmium Battery Corp., Easthampton, Mass.
- Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.
- Noble & Westbrook Mfg. Co., 27 Westbrook St., East Hartford 6, Conn.
- Nonotuck Mfg. Co., Holyoke, Mass.
- Norrman Laboratories, Ernst, Williams Bay, Wis.
- Norsid Mfg. Co., Inc., 21 Atherton St., Yonkers 1, N. Y.
- North American Electric Lamp Co., 1014 Tyler St., St. Louis 6, Mo.
- North American Philips Co., Inc., 100 East 42nd St., New York 17, N. Y.
- North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
- North Hills Electric Co., Inc., P. O. Box 427, Great Neck, N. Y.
- Northeastern Engineering, Inc., Manchester, N. H.
- Northern Electronic & Vacuum Industries, St. Sauveur, P. Q., P. O. Box 105, Canada.
- Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
- Northern Mfg. Co., 38 Spring St., Newark, N. J.
- Northern Metal Products Co., 3300 W. Lake St., Chicago 24, Ill.
- Northern Radio Co., Inc., 143-145 W. 22nd St., New York 11, N. Y.
- Northern-Zaleski, Ltd., Pratt Oval, Glen Cove, N. Y.
- Northfield-Linden Corp., 147 Ocean Ave., Lynbrook, N. Y.
- North Shore Nameplate Co., 209-14 41 Ave., Bayside 61, N. Y.
- Norton Co., 1 New Bond St., Worcester 6, Mass.
- Nothofer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
- Nuclear Development Lab., P. O. Box 7034, Kansas City, Mo.
- Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
- Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
- Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
- Nuclear Research & Development Inc., 1094 Sutter Ave., St. Louis 5, Mo.
- Nucleonic Company of America, The, 497 Union St., Brooklyn 31, N. Y.
- Numeral Stamp & Tool Co., Huguenot Park, Staten Island 12, N. Y.
- Nyllok Corp., Box 341, Elmira, N. Y.
- Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10, Ill.
- Offner Electronics Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
- Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
- Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.
- Ohmweve Co., 43 Darcy St., West Hartford 6, Conn.
- Okonite Co., The, Canal Street, Passaic, N. J.
- Olesen Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif.
- Olin Industries Inc., Electrical Division, 275 Winchester Ave., New Haven 4, Conn.
- Olympic Metal Products Co., Inc., Phillipsburg, N. J.
- Olympic Radio & Television Co., 34-01 38th Ave., Long Island City, N. Y.
- Omega Mfg. Co., 40 Hudson St., New York, N. Y.
- Onan & Sons Inc., D. W., University Ave. at 25th St., S. E., Minneapolis 14, Minn.
- O'Neill-Irwin Mfg. Co., 321 Eighth Ave., Lake City, Minn.
- Opad-Green Co., 71-5 Warren St., New York 7, N. Y.
- Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
- Oregon Electronic Mfg. Co., 2232 E. Burnside St., Portland 15, Ore.
- Orradio Industries, Inc., T-120 Marvyn Rd., Opelika, Ala.
- Ortho Filter Corp., 198 Albion Ave., Paterson 2, N. J.
- Orthon Corp., The, 196 Albion Ave., Paterson 2, N. J.
- Osborn Products, Glen Ellyn, Ill.
- Ossian Mfg. Co., Box 151A, Ossian, Ind.
- Oster Mfg. Co., John 1 Main St., Racine, Wis.
- Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif.
- Owens-Corning Fiberglass Corp., 16 E. 56th St., New York 22, N. Y.
- Owens Illinois Glass Co., Closure & Plastics Div., 405 Lexington Ave., New York 17, N. Y.
- Oxford Electric Corp., 3911 S. Michigan Avenue, Chicago 15, Ill.
- Ozald Div. of General Aniline & Film Corp., 770 Anso Rd., Johnson City, N. Y.
- P C A Electronics Inc., 2180 Colorado Ave., Santa Monica, Calif.
- P. M. Industries Inc., Stamford, Conn.
- PSP Engineering Co., 8420 Otis St., South Gate, Calif.
- Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
- Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
- Pacific Mercury Television Mfg. Corp., 14500 Aetna St., Van Nuys, Calif.
- Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.
- Pacific Transducer Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
- Pacific Universal Products Corp., 168 Vista Ave., Pasadena 8, Calif.
- Packard-Bell Co., 12333 W. Olympic Blvd., Los Angeles 64, Calif.
- Paisley Products Inc., 1770 Canalport Ave., Chicago 16, Ill.
- Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.
- Panelcraft, 8027 S. E. 13th Ave., Portland 2, Ore.
- Panelyte Div., St. Regis Sales Corp., 230 Park Ave., New York 17, N. Y.
- Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
- Panoramic Radio Products, Inc., 10 South Second Ave., Mt. Vernon, N. Y.
- Pantek Co., Box 16945, West Branch, Los Angeles 46, Calif.
- Par-Metal Products Corp., 32-62 49th Street, Long Island City 3, N. Y.
- Paragon Electric Co., Two Rivers, Wisconsin.
- Paragon-Revolute Corp., 71 S. Seventh Ave., Rochester 4, N. Y.
- Paramount Paper Tube Co., 614 Lafayette St., Fort Wayne, Ind.
- Paravox, Inc., 2056 E. 4th St., Cleveland 15, Ohio.
- Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.
- Parisier & Co., Maurice I., 1475 Broadway, New York 36, N. Y.
- Parker-Kalon Corp., 200 Varick St., New York 14, N. Y.
- Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
- Patent Button Co. of Tennessee, 2005 Century St., Knoxville, Tenn.
- Paterson Magnet Wire Div., Overlakes Corp., 132 Beckwith Ave., Paterson, N. J.
- Patton-MacGuey Co., 17 Virginia Avenue, Providence 5, R. I.
- Patwin Instruments a Div. of The Patent Button Co., 41 Brown St., Waterbury 88, Conn.
- Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.
- Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, Ill.
- Peck & Harvey, 5650 N. Western Ave., Chicago 45, Ill.
- Pedersen Electronics Co., Mount Diablo Blvd., Lafayette, Calif.
- Peeco Corp., 2760 Whittier Blvd., Los Angeles 23, Calif.
- Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
- Peerless Photo Products, Shoreham, N. Y.
- Peerless Products Industries, 812 N. Pulaski Ave., Chicago 51, Ill.
- Peirce Wire Recorder Corp., 1328 Sherman Avenue, Evanston, Illinois.
- Penn Engineering & Mfg. Corp., Box 311, Doylestown, Pa.
- Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
- Penn Television Products Co., Allegheny & Trenton Ave., Philadelphia 34, Pa.
- Penn Tran Corp., Bellefonte, Pa.
- Pennsylvania Optical Co., 234 S. 8th St., Reading 2, Pa.
- Pennsylvania Testing Laboratory, Doylestown, Pa.
- Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
- Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
- Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, Ill.
- Perkin-Elmer Corp., Main Ave., Norwalk, Conn.
- Perkin Engineering Corp., 345 Kansas St., El Segundo, Calif.
- Parmacel Tape Corp., U. S. Highway 1, New Brunswick, N. J.
- Permag Corp., 214 Taaffe Place, Brooklyn 5, N. Y.
- Permo Inc., 6415 Ravenswood Ave., Chicago 26, Ill.
- Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
- Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y.
- Pfanstiehl Chemical Co., 104 Lake View Ave., Waukegan, Ill.
- Pfeffer Products, 3901 W. 54th St., Los Angeles, Calif.
- Phalo Plastics Corp., 25 Foster St., Worcester 8, Mass.
- Phaostroon Co., 151 Pasadena Ave., South Pasadena, Calif.
- Pheps Dodge Copper Products Corp., 40 Wall St., New York, N. Y.
- Pheoil Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
- Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
- Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.
- Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
- Philadelphia Steel & Wire Corp., Penn St. & Belfield Ave., Philadelphia, Pa.
- Philamon Laboratories, Inc., 5717 Third Ave., Brooklyn 20, N. Y.
- Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
- Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.
- Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
- Philco Corp., Government & Industrial Div., 4700 Wisconsin Ave., Philadelphia 44, Pa.
- Phillips Laboratories, Inc., Irvington, N. Y.
- Phillips Control Corp., Dept. EB 1420, Joliet, Ill.
- Phillips & Hiss Co., Inc., 1155 N. McCadden Place, Hollywood 38, Calif.
- Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
- Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.

Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.

Phosphor Bronze Corp., 20 Franklin St., Seymour, Conn.

Photo Chemical Products, Inc., 479 Walton Ave., New York 51, N. Y.

Photobell Company, 116 Nassau St., New York 7, N. Y.

Photocircuits Corp., Glen Cove, N. Y.

Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

Photographic Products, Inc., 6916 Romaine St., Hollywood 38, Calif.

Photoswitch, Inc., 78 Broadway, Cambridge 42, Mass.

Photovolt Corp., 95 Madison Ave., New York 16, N. Y.

Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.

Pickard & Burns, Inc., Needham, Mass.

Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.

Pickering & Co., 309 Woods Ave., Oceanside, N. Y.

Pierce & Stevens, Inc., Buffalo 3, N. Y.

Piezo Products Co., Whitney St., Framingham, Mass.

Pilgrim Screw Co., 259 Dexter St., Providence, R. I.

Pilot Chemicals, Inc., 47 Felton St., Waltham 54, Mass.

Pilot Radio Corp., 37-06 36th St., Long Island City N. Y.

Pioneer Electric Co., 3700 East Olympic Blvd., Los Angeles 23, Calif.

Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.

Pioneer Electronics Corp., Santa Monica, Calif.

Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.

Pioneer Gen-E-Motor Corp., Dept. EBG, 5841 W. Dickens, Chicago 39, Ill.

Pioneer Machine Works, 6136 Adam St., West New York, N. J.

Pioneer Tool Co., 5008 W. Jefferson Blvd., Los Angeles, Calif.

Piqua Machine & Mfg. Co., Young & College Sts., Piqua, Ohio.

Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

Pittsburgh Plate Glass Co., 2000 Grant Bldg., Pittsburgh 20, Pa.

Pix Mfg. Co., Inc., 24 Bedford St., Newark, N. J.

Planet Mfg. Corp., 225 Belleville Ave., Bloomfield, N. J.

Plaskon Division, Libbey-Owen-Ford Glass Co., 2112-24 Sylvan Avenue, Toledo 6, Ohio.

Plastic Capacitors, Inc., 2511 W. Moffat St., Chicago 47, Ill.

Plastic Metals Division, The National Radiator Co., 169 Bridge Street, Johnstown, Pa.

Plastic Products, Inc., 415 Lexington Ave., New York, N. Y.

Plastic Wire & Cable Corp., Jewett City, Conn.

Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.

Plastics & Electronics Co., Inc., P. O. Box 38, Station J, Buffalo 8, N. Y.

Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.

Plax Corp., P. O. Box 1019, Hartford 5, Conn.

Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.

Poinsettia Co., Inc., 112 Cedar Ave., Pitman 6, N. J.

Polan Industries, Huntington 19, W. Va.

Pollak Corp., Joseph, 75-99 Freeport St., Dorchester 22, Mass.

Polarad Electronics Corp., 100 Metropolitan Ave., Brooklyn 11, N. Y.

Polymer Corp., The, Reading, Pa.

Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.

Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.

Polytechnic Research & Development Co., Inc., 55 Johnson St., Brooklyn 1, N. Y.

Polytron Corp., 47 Martine Ave., White Plains, N. Y.

Polytron Engineering, Inc., 6625 Harford Road, Baltimore 14, Md.

Popper & Sons, Inc., 300 Fourth Ave., New York 10, N. Y.

Porcelain Products, Inc., Findlay, Ohio.

Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 2, Calif.

Positive Lock Washer Co., 181 Miller St., Newark 5, N. J.

Post Co., Frederick, 3650 N. Avondale Ave., P. O. Box 803, Chicago 90, Ill.

Potter & Brumfield, Princeton, Indiana.

Potter Co., 1850 Sheridan Rd., North Chicago, Ill.

Potter Instrument Co., 115 Cutter Mill Rd., Great Neck, N. Y.

Powdered Metal Products Corp., Franklin Park, Ill.

Power Conversions, 2635 W. Grand Ave., Chicago 12, Ill.

Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich.

Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.

Praktica Co., 48 W. 29th St., New York 1, N. Y.

Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.

Precise Measurements Co., Dept. EL-4, 942 Kings Highway, Brooklyn 23, N. Y.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Precision Crystal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.

Precision Electronic Components Ltd., 560 King St. W., Toronto, Ont.

Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.

Precision Metal Products Co. of Malden, 41 Elm St., Stoneham 80, Mass.

Precision Metal Smiths, Inc., 1087 E. 200 St., Cleveland 17, Ohio.

Precision Paper Tube Co., 2033 W. Charleston St., Chicago 47, Ill.

Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.

Precision Plastic Products Inc., 628-30 W. Lake St., Chicago 6, Ill.

Precision Radiation Instruments, Inc., 2235 S. La Brea Ave., Los Angeles 16, Calif.

Precision Resistor Co., 334 Badger Avenue, Newark 8, N. J.

Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.

Precision Tube Co., Inc., North Wales, Pa.

Preis Engraving Machine Co., 649 Highway 29, Hillside, N. J.

Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls, N. Y.

Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.

Premier Metal Products Co., 3160 Webster Ave., Bronx, N. Y.

Prescott Television Co., 7350 Beverly Blvd., Los Angeles 36, Calif.

Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.

Presto Recording Corp., Paramus, N. J.

Price Electric Corp., Frederick, Md.

Printed Cellophane Tape Co., 521 N. La Brea Ave., Los Angeles 36, Calif.

Process & Instruments, 60 Greenpoint Ave., Brooklyn 22, N. Y.

Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.

Product Associates, Inc., 318 W. Olympic Blvd., Los Angeles, Calif.

Product Engineering Laboratories Co., Inc., 314 Adams St., Newark 5, N. J.

Production Engineering Co., 173 Sargent Ave., Clifton, N. J.

Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.

Production Tool & Fixture Co., 37 W. Main St., Oyster Bay, N. Y.

Professional Electronics Co., 180 E. California St., Pasadena, Calif.

Progressive Mfg. Co., Torrington, Conn.

Protective Coatings Corp., 596 River Rd., Clifton, N. J.

Pulse Techniques, Inc., 1411 Palisade Ave., West Englewood, N. J.

Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.

Pyramid Electric Co., 1445 Hudson Blvd., North Bergen, N. J.

Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.

Pyroferic Co., Inc., 621 E. 216th St., New York 67, N. Y.

QRK Electronic Products, 445 N. Circle Drive, Fresno 4, Calif.

Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.

Quadriga Mfg. Co., 213 W. Grand Ave., Chicago 11, Ill.

Quaker City Gear Works, Red Lion & Philmont Rd., Bethayers, Pa.

Quality Components, Inc., St. Marys, Pa.

Quality Products Co., 387 Charles St., Providence, R. I.

Quam-Nichols Co., Marquette Rd. & Prairie Ave., Chicago 37, Ill.

Queens Tool Engineering & Mfg. Co., 15 Front St., Rockville Centre, N. Y.

R. B. M. Division, Essex Wire Corp., Logansport, Ind.

R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa Del Rey, Calif.

REF Manufacturing Corp., Jericho Turnpike, Mineola, N. Y.

R-F Electronics, Inc., 291 N.E. 61st St., Miami 37, Fla.

RFI Shielded Enclosures Corp., 3634 N. Lawrence St., Philadelphia 40, Pa.

R-J Audio Products, Inc., 164 Duane St., New York 13, N. Y.

Racon Electric Co., 52 E. 19th St., New York 3, N. Y.

Rada Products Co., 2911E W. Carroll Ave., Chicago 12, Ill.

Radar Engineers, 110 University St., Seattle 1, Wash.

Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio.

Radell Corp., 7900 Pendleton Pike, Indianapolis 26, Ind.

Radex Corp., 2076 N. Elston Avenue, Chicago 14, Ill.

Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.

Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.

Radiation, Inc., Melbourne, Fla.

Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.

Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.

Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y.

Radio Condenser Co., Camden, N. J.

Radio Cores, Inc., 9540 Tully Ave., Oak Lawn, Ill.

Radio Corp. of America, Engineering Products Dept., Camden, N. J.

Radio Corp. of America, Home Instrument Dept., Camden, N. J.

Radio Corp. of America, Record Dept., New York, N. Y.

Radio Corp. of America, Tube Dept., Harrison, N. J.

Radio Craftsmen, Inc., 4401 N. Ravenswood Ave., Chicago 40, Ill.

Radio Engineering Labs, Inc., 36-40 37th St., Long Island City 1, N. Y.

Radio Frequency Co., 44 Park St., Medfield, Mass.

Radio Frequency Labs, Inc., Boonton 2, N. J.

Radio Mfg. Engineers Inc., 300-302 First Ave., Peoria 6, Ill.

Radio Materials Corp., 1708 Belmont Ave., Chicago 13, Ill.

Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 60, N. Y.

Radio-Music Corp., 84 S. Water St., Port Chester, N. Y.

Radio Receptor Co., 251 W. 19th St., New York 11, N. Y.

Radio Sonic Corp., 186 Union Ave., New Rochelle, N. Y.

Radio Specialty Mfg. Co., 2023 S.E. 6th Ave., Portland 14, Ore.

Radioactive Products Inc., 443 W. Congress St., Detroit 26, Mich.

Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill.

Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.

Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.

Rae Motor Corp., P. O. Box 291, Racine, Wis.

Rahm Instruments, Inc., 12 West Broadway, New York 7, N. Y.

Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.

Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.

Ramsey Industries, Inc., 15-19 Railroad Ave., New Rochelle, N. Y.

Randall, Inc., Douglas, 102 High St., Westerly, R. I.

Randall Mfg. Co., Inc., 801 Edgewater Rd., New York 59, N. Y.

Rangertone, Inc., 73 Winthrop St., Newark 4, N. J.

Rapid Electric Co., 2881 Middletown Rd., New York 61, N. Y.

Rapid Specialties Co., 327 W. Huron Street, Chicago 10, Ill.

Rattray & Co., Inc., George, 92-32 Union Hall St., Jamaica 5, N. Y.

Rauland Corp., 4545 N. Knox Ave., Chicago 41, Ill.

Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.

Rawson Electrical Instrument Co., 111 Potter St., Cambridge 42, Mass.

Ray-O-Vac Co., 212 E. Washington Ave., Madison, Wis.

Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.

Raypar, Inc., 7800 W. Addison St., Chicago, Ill.

Raytheon Mfg. Co., Equipment Sales Div., Waltham 54, Mass.

Raytheon Mfg. Co., Power Tube Div., Waltham 54, Mass.

Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.

Raytheon Mfg. Co., Special Products Div., 4132 W. Belmont Ave., Chicago 41, Ill.

Raytheon Television & Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.

Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.

Ready Power Co., The, Power Plant Div., 11231 Freud Ave., Detroit 14, Mich.

Recordisc Corp., 395 Broadway, New York, N. Y.

Recoton Corp., 147 W. 22nd St., New York 11, N. Y.

Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif.

Red Bank Division, Bendix Aviation Corp., Eatontown, N. J.

Redman Electronics Corp., P. O. Box 72, Thompsonville, Conn.

Redmond Co., Inc., Elm St., Owosso, Mich.

Reed Research, Inc., 1048 Potomac St. N.W., Washington, D. C.

Reeder & Co., Charles M., 171 Victor Ave., Detroit 3, Mich.

Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.

Reeves-Hoffman Corp., 145 Cherry St., Carlisle, Pa.

Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.

Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.

Refrigeration Systems, Inc., 646 W. Washington Blvd., Chicago 6, Ill.

Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.

Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.

Reichhold Chemicals Inc., 630 Fifth Ave., New York 20, N. Y.

Reilly Tar and Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis, Ind.

Reiner Electronics Co., Inc., 152 W. 25th St., New York, N. Y.

Rek-O-Kut Co., Inc., 38-03A Queens Blvd., Long Island City, N. Y.

Reliable Spring and Wire Forms Co., Fulton Rd. and Paris Ave., Cleveland 9, Ohio.

Reliance Automatic Lighting Co., 1919 Mead St., Racine, Wis.

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

Rentar Packaging Co., Inc., 1539 Troy Ave., Brooklyn, N. Y.

Reon Resistor Corp., 117 Stanley Ave., Yonkers, N. Y.

Renath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.

Republic Foil & Metal Mills, Inc., 55 Triangle St., Danbury, Conn.

Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.

Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.

Research Development Manufacture, 429 E. Collom St., Philadelphia 44, Pa.

Research Electronics Lab., 2459 Susquehanna Rd., Roslyn, Pa.

Resin Industries, Santa Barbara, Calif.

Resistance Products Co., 714 Race St., Harrisburg, Pa.

Resistoflex Corp., 39 Planson St., Belleville 9, N. J.

Resistor Corp. of Nevada, P. O. Box 2502, Reno, Nev.

Resistors, Inc., 5226 W. 26th St., Chicago 50, Ill.

Revere Camera Co., 320 E. 21st St., Chicago 16, Ill.

Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.

Rex Corp., 51 Lansdowne St., Cambridge 39, Mass.

Rex Rhostat Co., 3 Foxhurst Rd., Baldwin, N. Y.

Reynolds Electric Co., 3000 River Rd., River Grove, Ill.

Reynolds Metals Co., 2000 S. 9th St., Louisville, Ky.
Rhode Island Insulated Wire Co., 624 S. Michigan, Chicago 5, Ill.
Rhoous Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.
Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
Richards Co., Inc., Arklay S., 78 Winchester St., Newton Highlands 61, Mass.
Richardson-Allen Corp., 39-15 Main St., Flushing, N. Y.
Richardson Company, The, 2767 Lake St., Melrose Park, Illinois.
Riester & Thesmacher Co., Cleveland 13, Ohio.
Ripley Co., Inc., Middletown, Conn.
Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.
Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
Riverside Metal Co., The, Riverside, N. J.
Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y.
Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
Robinson Aviation, Inc., Teterboro Air Terminal, Teterboro, N. J.
Robinson Inc., Edward E., 95 Park Ave., Nutley 10, N. J.
Robtson Corp., 21300A W. Eight Mile Rd., P. O. Box 4885, Detroit 19, Mich.
Rochester Acoustical Labs., Inc., Rochester, Minn.
Rochester Electronics Co., Inc., Box 227 Penfield, N. Y.
Rockbestos Products Corp., 285 Nicolli St., New Haven 4, Conn.
Rocket Distributors, Inc., 209-14 41 Ave., Bayside 61, N. Y.
Roebly's Sons Co., John A., 640 Broad St., Trenton 2, N. J.
Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
Rogan Bros., 8031 N. Monticello Ave., Skokie, Ill.
Rogers Corp., Manchester, Conn.
Ronden Manufacturing Company, 4739 Montrose Ave., Chicago 41, Ill.
Rohn Mfg. Co., 116 Limestone, Bellevue, Peoria, Ill.
Rola Co., Inc., The, 2530 Superior Ave., Cleveland 14, Ohio.
Rollan Electric Co., 8020 S. South Park Ave., Chicago 19, Ill.
Roller-Smith Corporation, Bethlehem, Pa.
Rollin Co., 2010 N. Lincoln Ave., Pasadena 3, Calif.
Romac Products Co., 48-01 25th Ave., Long Island City 3, N. Y.
Rome Cable Corp., 330 Ridge St., Rome, N. Y.
Rosen Engineering Products, Inc., Raymond, 32nd & Walnut Sts., Philadelphia 4, Pa.
Ross Engineering Corp., 444 Madison Ave., New York, N. Y.
Ross Mfg. Co., 2405 Armitage Ave., Chicago 47, Ill.
Rostan Corp., 5660 59th St., Maspeth 78, N. Y.
Rotron Mfg. Co., Inc., 7-9 Schoonmaker Lane, Woodstock, N. Y.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Royal Electric Co., Inc., Pawtucket, R. I.
Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
Ruby Chemical Co., 68 McDowell St., Columbus, Ohio.
Ruge-de Forest, Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
Rush Wire Stripper Division, The Eraser Co., Inc., 1068 S. Clinton St., Syracuse 4, N. Y.
Ruska Instrument Corp., 4607 Montrose Blvd., Houston 6, Texas.
Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N. Y.
Russell & Stoll Co., Inc., 125-6 Barclay St., New York 7, N. Y.
Rust Industrial Co., 608 Willow St., Manchester, N. H.
Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.
Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
Rynel Corp., Miller St., Sterling, Ill.

"S" Corrugated Quenched Gap Co., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J.
S-C Laboratories, Inc., 37 George St., Newark 5, N. J.
S. N. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis.
S & S Machinery Co., 140 S. 53rd St., Brooklyn, N. Y.
Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
St. John X-Ray Laboratory, Califon, N. J.
St. Mary's Carbon Co., State Rd., St. Marys, Pa.
Sanborn Co., Industrial Div., 39 Osborn St., Cambridge 39, Mass.
Sanders Associates, Nashua, N. H.
Sandsteel Spring Div., Sandvik Steel, Inc., 145 Hudson St., New York 13, N. Y.
Sanford Miller Co., 373 S. 2nd St., Brooklyn 11, N. Y.
Sangamo Electric Co., Capacitor Div., Marion, Illinois.
Sargent & Co., New Haven 9, Conn.
Sargent-Raymont Co., The, 1401 Middle Harbor Rd., Oakland 20, Calif.
Sarkes Tarzian Inc., 539 S. Walnut, Bloomington, Ind.
Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
Saxonburg Ceramics, Saxonburg, Pa.
Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
Schaevitz Engineering, Crescent Blvd. at Drexel Ave., Pennsauken Township, Camden 11, N. J.
Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio.
Schenectady Varnish Co., Schenectady, N. Y.

Scherma Mfg. Co., Inc., F. A., 424 Broome St., New York 13, N. Y.
Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.
Schmidt, Inc., George T., 4100 Ravenswood Ave., Chicago 13, Ill.
Schott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Calif.
Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhurst, N. Y.
Schuttig & Co., Inc., 9th & Kearney Sts. N. E., Washington 17, D. C.
Schweitzer Inc., Peter J., 405 Lexington Ave., New York 17, N. Y.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 30, Ill.
Scientific Assembly Co., 65 Hope St., Brooklyn 11, N. Y.
Scientific Electronic Labs., Inc., 866 Bergen St., Newark 8, N. J.
Scientific Radio Products, Inc., 1024 Farnam St., Omaha, Neb.
Scientific Radio Service, 4301 Sheridan St., University Park, Md.
Scientific Specialties Corp., Snow & Union Sts., Brighton 35, Mass.
Scientific Wood Cabinet Co., 88 Holmes St., Belleville, N. J.
Scintilla Magneto Div., Bendix Aviation Corp., Sidney, N. Y.
Scott Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Scovill Manufacturing Co., Waterbury 20, Conn.
Screw Corp. of America, 103 Park Ave., New York 17, N. Y.
Swaly Machine Co., 62 Walter St., Bridgeport, Conn.
Sealro Corp., 181 Union Ave., New Rochelle, N. Y.
Sealot Corporation, 45 Willard Ave., Providence 5, R. I.
Sealtron Co., 9701 Reading Road, Cincinnati 15, Ohio.
Sears Co., M. J., Delaware County, Roxbury, N. J.
Seaton Metals Corp., 228 E. 45th St., New York 17, N. Y.
Segal, Edward, 72 Spring St., New York 12, N. Y.
Sei-Rex Precious Metals, Inc., 229 Main St., Belleville 9, N. J.
Selectar Industries, Inc., 401 E. 138th St., New York 54, N. Y.
Seit Lock Fastener Corp., 259 Stephens St., Belleville 9, N. J.
Semler Industries, 6853 Lankershim Blvd., North Hollywood, Calif.
Senn Corp., New Augusta, Ind.
Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.
Sentinel Radio Corp., 2100 Dempster St., Evanston, Ill.
Sequoia Process Corp., 881 Douglas Ave., Redwood City, Calif.
Serdex, Inc., 91 Cambridge St., Boston, Mass.
Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.
Servo-Tek Products Co., 1086 Goffie Rd., Hawthorne, N. J.
Servomechanisms, Inc., Post & Stewart Aves., Westbury, N. Y.
Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
Servotrol Co., 114 W. Illinois St., Chicago 10, Ill.
Sessions Clock Co., Forestville, Conn.
Set Screw & Mfg. Co., 470 Main St., Bartlett, Ill.
Setchell Carlson, Inc., 330 Fifth Ave., New Brighton, Minn.
Shakeproof, Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.
Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.
Shaw Insulator Co., 160 Colt St., Irvington 11, N. J.
Sheffco Mfg. Co., 111 W. Ruby Ave., Palisades Park, N. J.
Sheldon Electric Co., Div. of Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J.
Shell Chemical Corp., 500 Fifth Ave., New York 36, N. Y.
Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.
Sherold Crystals, Inc., 1401 Fairfax Trafficway, Kansas City, Kan.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
Sheraton Television Corp., 200 River St., Red Bank, N. J.
Shevers Inc., Harold, 123 W. 64th St., New York 23, N. Y.
Shielding, Inc., Riverside Park, N. J.
Shields Laboratories, Inc., 810 N. Lincoln Ave., Pittsburgh 12, Pa.
Shoe Form Co., Inc., Auburn, N. Y.
Shopsin Paper Co., 112 Charlton St., New York 14, N. Y.
Shore Engineering Inc., 232 West Ave., Long Branch, N. J.
Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.
Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.
Shurite Meters, 35-B Hamilton St., New Haven 8, Conn.
Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.
Sierra Electronic Corp., San Carlos, Calif.
Sightmaster of California Co., Gillespie Airport, Santee, Calif.
Sigma Instruments, Inc., 180 Pearl St., South Braintree 85, Mass.
Signal Engineering & Mfg. Co., 154-6 W. 14th St., New York 11, N. Y.
Sillocks-Miller Co., 10 Parker Ave., West, South Orange, N. J.
Simmons Fastener Corp., 1752 N. Broadway, Albany 1, N. Y.

Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
Skinner Electric Valve Div., The Skinner Chuck Co., Edgewood Ave., New Britain, Conn.
Skottie Electronics, Inc., 1106 Myers St., Peckville, Pa.
Skyline Antennae Corp., 200 Silver St., Sharon, Pa.
Slip Ring Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
Slip Ring Co. of America, 2038 Broadway, Santa Monica, Calif.
Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
Smith, Inc., Herman H., 436 18th St., Brooklyn 15, N. Y.
Smuckler Mfg. Co., A. F., 202-208 Tillary St., Brooklyn 1, N. Y.
Snyder Mfg. Co., Philadelphia 40, Pa.
Sola Electric Co., 4633 W. 16th St., Chicago 50, Ill.
Solar Mfg. Corp., 2660 E. 46th St., Los Angeles, Calif.
Soldering Specialties Co., 19 Chatham Rd., Summit, N. J.
Sommer & Maca Glass Machine Co., 3600 Oakley Ave., Chicago 9, Ill.
Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
Sonic Recording Products, Inc., 58 Mill Rd., Freeport, N. Y.
Sonotone Corp., P. O. Box 200, Saw Mill River Road, Elmsford, N. Y.
Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
Sorensen & Co., Inc., 375 Fairfield Ave., Stamford, Conn.
Sorensen Industrial Electronic Co., 87 N. Day St., Orange, N. J.
Sorgel Electric Co., 838 W. National Ave., Milwaukee 4, Wis.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Sound Apparatus Co., Stirling, N. J.
Sound Scriber Corp., 146 Munson St., New Haven 4, Conn.
South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.
Southco Division, South Chester Corp., 1417 Finance Bldg., Philadelphia 2, Pa.
Southern Industries of Maryland, Inc., 1401 Reistertown Rd., Pikesville 8, Md.
Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Spar Engineering & Development Inc., S & Paxson Aves., Wyncote, Pa.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
Speak-O-Phone Recording & Equipment Co., 23 W. 60th St., New York, N. Y.
Special Chemicals Corp., 30 Irving Place, New York 3, N. Y.
Special Instruments Laboratory, Inc., 1003 Highland Ave., Knoxville, Tenn.
Special Products Co., Silver Spring, Md.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
Specialty Battery Co., Madison 4, Wisconsin.
Specific Products, 5864 Hollywood Blvd., Hollywood 28, Calif.
Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill.
Speer Carbon Co., St. Marys, Pa.
Speer Resistor Division, Speer Carbon Co., St. Marys, Pa.
Spellman Television Co., Inc., 3029 Webster Ave., New York 67, N. Y.
Spencer-Kennedy Labs., Inc., 186 Massachusetts Ave., Cambridge 39, Mass.
Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
Sperry Gyroscope Co., Div. of The Sperry Corp., Great Neck, N. Y.
Sperry Products, Inc., Danbury, Conn.
Sperti-Farraday, Inc., Cincinnati Div., Cincinnati 2, Ohio.
Sphere Co., Inc., P. O. Box 557, Short Hills, N. J.
Spiraling Products Co., 60 Grand St., New York, N. Y.
Sponge Rubber Products Co., The, 469 Derby Place, Shelton, Conn.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.
Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Stackpole Carbon Co., St. Marys, Pa.
Staedtler Inc., J. S., 55 Worth St., New York, N. Y.
Stahl, Inc., Michael, 215 Fulton St., New York 7, N. Y.
Stainless, Inc., Third St., North Wales, Pa.
Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
Stanat Tool & Machine Co., 47-28 37th St., Long Island City 1, N. Y.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
Standard Cabinet Co., 57 Washington Ave., Carlstadt, N. J.
Standard Coil Products Co., 2329 N. Pufaski Rd., Chicago 39, Ill.
Standard Crystal Co., 1714 Locust St., Kansas City, Mo.
Standard Electric Time Co., The, 89 Logan St., Springfield, Mass.
Standard Electronics Corp., 289 Emmet St., Newark 5, N. J.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Standard Locknut & Lockwasher Inc., 510 N. Capitol Ave., Indianapolis 4, Ind.

Standard Metals Corp., 262 Broad St., North Attleboro, Mass.

Standard Piezo Co., 127 Cedar St., Carlisle, Pa.

Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.

Standard Transformer Corp., 3571 Elston Ave., Chicago 18, Ill.

Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.

Stanley Works, The, 195 Lake St., New Britain, Conn.

Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.

Star Expansion Bolt Co., 147-149 Cedar St., New York 6, N. Y.

Star Expansion Products Co., 147 Cedar St., New York 6, N. Y.

Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.

Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

States Co., 19 New Park Ave., Hartford 6, Conn.

Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.

Staver Co., Inc., Box 431, Bay Shore, N. Y.

Sta-Warm Electric Co., Ravenna, Ohio.

Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.

Steger Furniture Mfg. Co., Steger, Ill.

Steiner Mfg. Co., Wm., 43 Bruen St., Newark 5, N. J.

Steiner-Ives Co., Springfield Rd., Union, N. J.

Stelma, Inc., 389 Ludlow St., Stamford, Conn.

Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Sterling Bolt Co., 363-405 W. Erle St., Chicago 10, Ill.

Sterling Engineering Co., Inc., 54 Mill St., Laconia, N. H.

Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.

Sterling Mfg. Co., 7201 Wentworth, Cleveland, Ohio.

Sterling Television Inc., 15 W. Lake St., Chicago 1, Ill.

Sterling Transformer Corp., 297 N. Seventh St., Brooklyn 11, N. Y.

Stevens-Arnold Inc., 22 Elkins St., South Boston, Mass.

Stevens Mfg. Co., Inc., 69 S. Walnut St., Mansfield, Ohio.

Stevens Mfg. Co., Inc., Geo., 6022 N. Rogers Ave., Pulaski & Peterson, Chicago 30, Ill.

Stevens Paper Mills, Inc., Windsor, Conn.

Stevens Products Inc., 86-88 Main St., East Orange, N. J.

Stevens-Walden, Inc., 475 Shrewsbury St., Worcester 4, Mass.

Stevenson Bro. & Co., 110 Race St., Philadelphia 6, Pa.

Steward Mfg. Co., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn.

Stewart Mfg. Corp., F. W., 4311 Ravenswood Ave., Chicago 13, Ill.

Stewart-Speller Associates, Soquel, Calif.

Stewart Stamping Co., 630 Central Park Ave., Yonkers 4, N. Y.

Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversy Parkway, Chicago 14, Illinois.

Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.

Stockman Electronics Research Co., 543 Lexington St., Waltham 54, Mass.

Stoddart Aircraft Radio Co., 6644 Santa Monica Blvd., Hollywood 38, Calif.

Stokes Machine Co., F. J., 5850 Tabor Road, Olney Post Office, Philadelphia 20, Pa.

Stolper Steel Products Co., 308 Pilgrim Rd., Menomonee Falls, Wis.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

Stone Paper Tube Co., Inc., 900 Franklin St., N. E., Washington 17, D. C.

Stow Manufacturing Co., 445 State St., Binghamton, N. Y.

Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

Stromberg-Carlson Co., Rochester 3, N. Y.

Stronghold Screw Products, Inc., 216-222 West Hubbard St., Chicago 10, Ill.

Struthers-Dunn, Inc., 150 N. 13th Street, Philadelphia 7, Pa.

Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.

Sturtevant Co., P. A., Addison, Ill.

Summit Coil Co., 67 Union Place, Summit, N. J.

Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

Sun Electric Corp., 6323 Avondale Ave., Chicago 31, Ill.

Super Electric Products Corp., 46 Oliver St., Newark 1, N. J.

Super Flow Solder Co., 90 State St., Albany, N. Y.

Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.

Superior Electric Co., The, 4000 Mae Ave., Bristol, Conn.

Superior Flake Graphite Co., 33 S. Clark St., Chicago 3, Ill.

Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio.

Superior Instrument Co., 227 Fulton St., New York 7, N. Y.

Superior Steatite & Ceramic Corp., 32-49 Gale Ave., Long Island City 1, N. Y.

Superior Tube Co., 2504 Germantown Pike, Norristown, Pa.

Supreme, Inc., Box E-552, Greenwood, Miss.

Suprenant Mfg. Co., 199 Washington St., Boston 8, Mass.

Swift & Sons, M., 10 Love Lane, Hartford 1, Conn.

Swiss Jewel Co., Lafayette Bldg., Philadelphia 6, Pa.

Switchcraft, Inc., 1328-30 N. Halsted St., Chicago 22, Ill.

Sylvania Electric Products, Inc., 1740 Broadway, New York 19, N. Y.

Sylvania Electric Products, Inc., Radio & Television Div., 254 Rano St., Buffalo 7, N. Y.

Symphonic Radio & Electronic Corp., 160 Washington St., Boston 14, Mass.

Symphony Radio & TV Co., 925 South Western Ave., Los Angeles 6, Calif.

Synchro Start Products, Inc., 8151 N. Ridgeway Ave., Skokie, Ill.

Syncor Products Co., Malden, Mass.

Synthane Corp., Oaks, Pa.

Syntron Co., 243 Lexington, Homer City, Pa.

Syracuse Ornamental Co., Inc., 581 S. Clinton St., Syracuse, N. Y.

T. L. G. Electric Corp., 31 W. 27th St., New York 1, N. Y.

T. V. Products Corp., 907 E. 23rd St., Paterson, N. J.

Tablet & Ticket Co., 1021 W. Adams St., Chicago 7, Ill.

Taco West Corp., 525 N. Noble St., Chicago 22, Ill.

Taffet Radio & Television Co., 2530 Belmont Ave., New York 58, N. Y.

Takk Corp., Newark, Ohio.

Talk-A-Phone Co., 1512 S. Pulaski Rd., Chicago 23, Ill.

Talk-O Products, Inc., 163 St. Paul St., Rochester 6, N. Y.

Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.

Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.

Taylor Fibre Co., Norristown, Pa.

Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.

Tech Laboratories, Inc., Bergen & Edsall Bldgs., Pallsades Park, N. J.

Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y.

Technical Appliance Corp., Sherburne, N. Y.

Technical Associates, 140 W. Providencia Ave., Burbank, Calif.

Technical Material Corp., The, P. O. Box 142, Mamaroneck, N. Y.

Technical Operations, Inc., 6 Schouler Court, Arlington 74, Mass.

Technical Service Corp., 3116 Michigan Drive, Louisville 5, Ky.

Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.

Technicraft Supply Co., 1156 Commonwealth Ave., Boston 34, Mass.

Technitrol Engineering Co., 2751 N. 4th St., Philadelphia 33, Pa.

Technograph Printed Electronics Inc., 191 Main St., Tarrytown, N. Y.

Technology Instrument Corp., 533 Main St., Acton, Mass.

Techron Co., 254-256 Friend St., Boston 14, Mass.

Tecifax Corp., 276 High St., Holyoke, Mass.

Teiner Co., Inc., Roland, 134 Tremont St., Everett 49, Mass.

Tektrolix, Inc., P. O. Box 831, Portland 7, Ore.

Tel-A-Ray Enterprises Inc., Box 332, Henderson, Ky.

Tele-Ray Tube Co., Inc., 984 Saw Mill River Rd., Yonkers, N. Y.

Telectrome, Inc., 88 Merrick Rd., Amityville, N. Y.

Telectron Dept. of General Electric Co., Ashland, Mass.

Tele-Clear Corp., 185 N. Wabash Ave., Chicago 1, Ill.

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

Telectron Co., The, 4019 Prospect St., Cleveland 3, Ohio.

Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London, W. 3, England.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.

Telemetering Associates, P. O. Box 6, Silver Spring, Md.

Telonic Industries, 444 S. Rural, Indianapolis 1, Ind.

Telephonics Corp., Park Ave., Huntington, N. Y.

Telegrip Radio Co., 2559 W. 21st St., Chicago 8, Ill.

Teraradio Engineering Corp., 99 Wall St., New York 5, N. Y.

Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.

Teletronics Laboratory, Inc., Kinkel St., Westbury, N. Y.

Television Equipment Corp., 52 Broadway, New York 4, N. Y.

Television Utilities Corp., 1315 Jericho Turnpike, New Hyde Park, N. Y.

Television Zoomer Corp., Room 2223, 500 Fifth Avenue, New York, N. Y.

Televisto Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

Telewave Laboratories, Inc., 100 Metropolitan Ave., Brooklyn 11, N. Y.

Tele-Ex-Pand Products Sales Corp., P. O. Box 392, Berwick, Pa.

Telex Inc., Telex Park, St. Paul 1, Minn.

Tel-Instrument Co., 50 Paterson Ave., East Rutherford, N. J.

Tel-O-Tube Corp. of America, 180 Van Riper Ave., East Paterson, N. J.

Tel-Rad Mfg. Co., Inc., 7th & Madison St., Fennimore, Wis.

Telrex, Inc., Asbury Park, N. J.

Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.

Television Laboratories, Inc., 5045 W. Lake St., Chicago 44, Ill.

Tempel Mfg. Co., 1939 Bryn Mawr Ave., Chicago 26, Ill.

Tempo TV Products Co., 2450 Ramona Blvd., Los Angeles 33, Calif.

Tenney Engineering Inc., 26 Avenue B., Newark 5, N. J.

Tensolite Insulated Wire Co., Inc., 198 Main St., Tarrytown, N. Y.

Tensor Electric Development Co., Inc., 343 Classon Ave., Brooklyn 5, N. Y.

Terado Co., 1068 Raymond Ave., St. Paul 14, Minn.

Terracing Co., L. H., 16 W. 61st St., New York, N. Y.

Terry Mestre Ltd., 103 Park Ave., New York 17, N. Y.

Tetrad Corp., 62 St. Mary St., Yonkers 2, N. Y.

Texas Instruments Incorporated, 6000 Lemmon Ave., Dallas, Texas.

Ther Electric & Machine Works, 17 South Jefferson St., Chicago, Ill.

Thermador Electric Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif.

Thermal Syndicate, Ltd., 14 Bixley Heath, Lynbrook, N. Y.

Thermo Instruments Co., Box 336, Belmont, Calif.

Thomas & Betts Co., 36 Butler St., Elizabeth 1, N. J.

Thomas & Skinner Steel Products Co., 1122 E. 23rd St., Indianapolis, Ind.

Thomas & Sons, William, 91 Pearl St., Brooklyn, N. Y.

Thomas Electronics, Inc., 118 Ninth St., Passaic, N. J.

Thompson-Bremer Co., 1644 W. Hubbard St., Chicago 22, Ill.

Thompson Co., H. I., 1733 Cordova St., Los Angeles 7, Calif.

Thompson Corp., The, George S., South Pasadena, Calif.

Thompson & Associates, John E., 7210 S. Yates Ave., Chicago 49, Ill.

Thompson Products, Inc., Electronics Div., 2196 Clarkwood Rd., Cleveland 3, Ohio.

Thor Ceramics, Inc., 225 Belleville Ave., Bloomfield, N. J.

Thor Manufacturers, Inc., 2420 Atlantic Ave., Brooklyn, N. Y.

Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.

Thordarson-Meisner Mfg. Divisions, Mt. Carmel, Ill.

Thwing-Albert Instrument Co., 5351 Pulaski Avenue, Philadelphia 44, Pa.

Tibbetts Industries, Inc., Camden, Maine.

Times Facsimile Corp., 540 W. 58th St., New York 19, N. Y.

Timetrol Co., 2919 Gladstone St., Rockford, Ill.

Timken Roller Bearing Co., Canton, Ohio.

Tinker & Razor, P. O. Box 281, San Gabriel, Calif.

Tinnerman Products Inc., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio.

Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.

Tobe Deutschmann Corp., 921 Providence Highway, Norwood, Mass.

Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.

Tomore Electric Corp., 131 Gould St., Rochester 10, N. Y.

Topflight Tape Co., 116 E. Market St., York, Pa.

Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.

Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.

Torgren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.

Torocoil Co., 1374 Mobile Court, St. Louis, Mo.

Torwico Electronics, Inc., 965 Frelinghuysen Ave., Newark 5, N. J.

Tracerlab Inc., 130 High St., Boston 10, Mass.

Trad Television Corp., 1001 First Ave., Asbury Park, N. J.

Tranco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif.

Transformer Engineers, 161 E. California St., Pasadena 1, Calif.

Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

Transformer Specialty Co., Inc., Bala Cynwyd, Pa.

Transformers, Inc., 532 North St., Endicott, N. Y.

Trans-Gel Products, Inc., 5 Matinecock Rd., Manor Haven, N. Y.

Transicoil Corp., 107 Grand St., New York 13, N. Y.

Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass.

Transitron Electronic Corp., 403-407 Main St., Melrose 76, Mass.

Transtron, Inc., 154 Spring St., New York 12, N. Y.

Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.

Transradio, Ltd., 138A Cromwell Rd., London SW 7, England.

Trans-Sonics, Inc., Bedford Airport, Bedford, Mass.

Transvision Inc., 460 North Ave., New Rochelle, N. Y.

Trav-Ler Radio Corp., 571 W. Jackson Blvd., Chicago, Ill.

Trenton Transformer Corp., Trenton, N. J.

Tresco, 3824 Terrace St., Philadelphia 28, Pa.

Triad Portable Case Corp., 310-314 W. Lincoln Ave., Mount Vernon, N. Y.

Triad Transformer Mfg. Co., 4055 Redwood Ave., Los Angeles, Calif.

Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.

Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.

Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.

Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.

Trim Inc., 400 W. Lake St., Libertyville, Ill.

Trimount Instrument Co., 3119 W. Lake St., Chicago 12, Ill.

Trimount Plastic Co., 71 Dudley St., Arlington, Mass.

Trio Mfg. Co., Griggsville, Ill.

Triplet & Barton Inc., 831 N. Lake St., Burbank, Calif.

Triplet Electrical Instrument Co., Harmon Road, Bluffton, Ohio.

Tru-Connector Corp., 416 Union St., Lynn, Mass.

Trumbull Electric Dept. of General Electric Co., Plainville, Conn.

Tru-Ohm Products Div., Model Engineering & Mfg. Co., 2800 Milwaukee Ave., Chicago 18, Ill.

Truscon Steel Division of Republic Steel Corp., Youngstown, Ohio.

Tubular Rivet & Stud Co., Linden St., Quincy, Mass.

Tung-Sol Electric Inc., 95 Eighth Ave., Newark 4, N. J.

Turner Co., The, 909 17th St., N. E., Cedar Rapids, Iowa.

Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
 Twentieth Century Electronics, Ltd., Centronics Works, King Henrys Drive, New Addington, Surrey, England.
 Tyniswitch Division, Sessions Clock Co., Forestville, Conn.

U.H.F. Resonator Corp., 224 Seventh St., Racine, Wis.
 Ucinite Co. Division, United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
 Ulanet Co., George, 413 Market St., Newark 5, N. J.
 Ultrasonic Corp., 61 Rogers St., Cambridge, Mass.
 Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill.
 Ungar Electric Tools Inc., 615 Ducommun St., Los Angeles 54, Calif.
 Uniform Tubes, Level Rd., Collegetown 2, Pa.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
 Union Electric Products Co., 24 Edison Place, Newark 2, N. J.
 United-Carr Fastener Corp., Cambridge 42, Mass.
 United Condenser Corp., 337 E. 139th St., New York 54, N. Y.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.
 United Electronics Co., 42 Spring St., Newark 4, N. J.
 United Mfg. & Service Co., 405 S. Sixth St., Milwaukee 4, Wis.
 United Pressed Products Co., 741 W. Harrison St., Chicago 7, Ill.
 United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago, Ill.
 United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.
 United Specialties Co., 9765 S. Cottage Grove Ave., Chicago 28, Ill.
 U. S. Components, Inc., 454 E. 148th St., New York 55, N. Y.
 U. S. Electronic Co., 262 Canner St., New Haven 11, Conn.
 U. S. Electronics Corp., 276 Warren St., Lyndhurst, N. J.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
 U. S. Gasket Co., P. O. Box 93, Camden, N. J.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 U. S. Graphite Co. Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
 U. S. Instrument Corp., 409 Broad St., Summit, N. J.
 U. S. Plywood Corp., Electrical Structures Dept., 55 W. 44th St., New York 17, N. Y.
 U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Steel Corp., 525 William Penn Place, Pittsburgh 30, Pa.
 U. S. Stoneware Co., The, Akron 9, Ohio.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
 United Transformer Co., 150 Varick St., New York 13, N. Y.
 United Wood Specialty Mfg. Co., 951 Broadway, Fall River, Mass.
 Unitrronics, Inc., 472 Paul Ave., Ferguson Station, St. Louis 21, Mo.
 Universal Aviation Equipment, Inc., 187 Lafayette St., New York 13, N. Y.
 Universal Chain Co., 92 Burnett Ave., Maplewood, N. J.
 Universal Drafting Machine Corp., 7960 Lorain Ave., Cleveland 2, Ohio.
 Universal Electric Co., 300 E. Main St., Owosso, Mich.
 Universal Electronics Co., 2012 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Universal Mfg. Co., Inc., 410 Hillside Ave., Hillside, N. J.
 Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.
 Universal Motor Co., 456 Universal Drive, Oshkosh, Wis.
 Universal Winding Co., P. O. Box 1605, Providence 1, R. I.
 University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y.
 Utah Radio Products Co., Inc., 1123 E. Franklin St., Huntington, Ind.
 Utting Associates, George, 290 Centre St., Newton 58, Mass.

V-M Corp., Benton Harbor, Mich.
 Vaco Products Co., 317 E. Ontario St., Chicago 11, Ill.
 Vacuum Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
 Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42, Mass.
 Vacuum Tube Products, 506 S. Cleveland St., Ocean-side, Calif.
 Valco Mfg. Co., 4700 W. Walton St., Chicago 51, Ill.
 Vallores Jewel Co., Lancaster, Pa.
 Valpey Crystal Corp., 1244 Highland St., Holliston, Mass.
 Van Dyke Instruments, Inc., 1927 First Ave., S., P. O. Box 355, St. Petersburg 1, Fla.
 Vapor Recovery Systems Co., 2820 N. Alameda, Compton, Calif.
 Varflex Corp., 308 N. Jay St., Rome, N. Y.
 Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y.
 Varian Associates, 990 Varian St., San Carlos, Calif.
 Vari-L Co., Inc., P. O. Box 1433, Stamford, Conn.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 Vector Electronic Co., 3352 San Fernando Rd., Los Angeles 65, Calif.
 Vectron, Inc., 404 Main St., Waltham 54, Mass.
 Veeder-Root, Inc., Hartford 2, Conn.
 Vendo Co., 7400 E. 12th St., Kansas City 8, Mo.
 Vesto Co., Inc., 20th & Clay, North Kansas City, Mo.
 Vibratoc Corp., 425 Bush St., San Francisco 8, Calif.
 Vibroplex Co., Inc., 833 Broadway, New York, N. Y.

Vibrascope Co., 6 E. 39th St., New York 16, N. Y.
 Vickers Electric Division, Vickers, Inc., 1825 Locust St., St. Louis 3, Mo.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Victoreen Instrument Co., 5806 Hough Ave., Cleveland 3, Ohio.
 Victory Engineering Corp., Springfield Rd., Union, N. J.
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
 Video Corp. of America, 229 W. 28th St., New York 1, N. Y.
 Video Products Corp., 42 West St., Red Bank, N. J.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 Viewflex Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.
 Vitramon, Inc., Box 544, Bridgeport, Conn.
 Vitroscan Corp., 6325 Guilford Ave., Box 6048, Indianapolis 20, Ind.
 Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Volkert Metal Stampings, Inc., John, 222-34 96th Ave., Queens Village 8, N. Y.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.
 Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
 Vulcan Electric Co., 88 Holten St., Danvers, Mass.

Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.
 Wagner Electric Corp., 6400 Plymouth Ave., St. Louis 14, Mo.
 Waldes Kohinoor Inc., 47-16 Austel Place, Long Island City 1, N. Y.
 Walker Co., George, 118 Amsterdam Ave., Passaic, N. J.
 Walkirt Co., 145 W. Hazel, Inglewood, Calif.
 Wall Mfg. Co., Grove City, Pa.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Walland-Pierce Corp., 1928 Pacific Coast Highway, Lomita, Calif.
 Walnut Machine Co., 1529 S. Walnut St., South Bend 14, Ind.
 Walser Automatic Timer Corp., Graybar Bldg., New York 17, N. Y.
 Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.
 Waltham Horological Corp., 711 Broad St., Lynn, Mass.
 Waltham Screw Co., 77 Rumford Ave., Waltham, Mass.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.
 Wappler, Inc., 27-10 Astoria Blvd., Long Island City 2, N. Y.
 Ward Leonard Electric Co., 31 South St., Mt. Vernon, N. Y.
 Ward Products Corp., Div. of the Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.
 Warren Wire Co., Pownal, Vt.
 Warrick Co., Charles F., 1964 W. Eleven Mile Rd., Berkley, Mich.
 Warrick, Frederick P., Rt. 1, W. Long Lake Rd., Bloomfield Hills, Mich.
 Wasserlein Mfg. Co., Inc., 126 Cass St., Joliet, Ill.
 Waterman Products Co., Inc., 2445-63 Emerald St., Philadelphia 25, Pa.
 Waters Conley Co., 501 First St. N. W., Rochester, Minn.
 Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.
 Waters Manufacturing, Inc., 4 Gordon St., Waltham 54, Mass.
 Waveforms, Inc., 333 Sixth Ave., New York 14, N. Y.
 Waveline, Inc., Box 470, Caldwell, N. J.
 Weathers Industries, 66 E. Gloucester Pike, Barrington, N. J.
 Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Webster Spring Corp., 176-182 Johnson St., Brooklyn 1, N. Y.
 Weckesser Co., 5261 Avondale Ave., Chicago 30, Ill.
 Weinschel Engineering Co., Inc., 10511 Metropolitan Ave., Kensington, Md.
 Weingarten Electronic Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.
 Welch Allyn, Inc., Skaneateles Falls, N. Y.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Weller Electric Corp., 846 Packer St., Easton, Pa.
 Wells & Co., Inc., A. H., 181 E. Aurora St., Waterbury, Conn.
 Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, Ill.
 Wells & Winegard, Burlington, Iowa.
 Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
 Wen Products, Inc., 5806 Northwest Highway, Chicago 31, Ill.
 West Coast Electrical Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 West Virginia Pulp & Paper Co., 230 Park Ave., New York 17, N. Y.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Western Electro-Acoustic Labs., 204 S. Beverly Drive, Beverly Hills, Calif.
 Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
 Western Gear Works, 2600 E. Imperial Highway, Los Angeles, Calif.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Western Insulated Wire Co., 2425 E. 30th St., Los Angeles 58, Calif.
 Western Sound & Electric Labs, Inc., 805 S. Fifth St., Milwaukee 4, Wis.

Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.
 Westfield Metal Products Co., Inc., Elm & Burton Sts., Westfield, Mass.
 Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.
 Westinghouse Electric Corp., Electronic Tube Div., Dept. A-500, Box 284, Elmira, N. Y.
 Westline Products Div. of Western Lithograph Co., 600 E. Second St., Los Angeles, Calif.
 Weston Electrical Instruments Corp., 614 Frelinghuysen Ave., Newark 5, N. J.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
 Wheeler Insulated Wire Co., Inc., 150 E. Aurora St., Waterbury 91, Conn.
 Wheeler Laboratories, Inc., Great Neck, N. Y.
 Whistler & Sons, Inc., S. B., 752 Military Rd., Buffalo 23, N. Y.
 Whitaker Cable Corp., Kansas City 16, Mo.
 White Dental Mfg. Co., S. S., Industrial Div., 10 E. 40th St., New York 16, N. Y.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
 Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.
 White Rock Mfg. Corp., White Rock, S. C.
 White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.
 Whitney Blake Co., New Haven 14, Conn.
 Whitso, Inc., 2037 Churchill St., Chicago 47, Ill.
 Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden, N. J.
 Wiedemann Machine Co., 4272 Wissahickon Ave., Philadelphia 32, Pa.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wilcox-Gay Corp., 79 Washington St., Brooklyn 1, N. Y.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilkor Division, Aerovox Corp., 2882 Detroit Ave., Cleveland 13, Ohio.
 Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio.
 Williams & Co., C. K., 640 N. 13th St., Easton, Pa.
 Willson Camera Co., Inc., 1401 Lawrence Road, Haver-town, Pa.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.
 Wilson & Co., G. C., 2 N. Passaic Ave., Chatham, N. J.
 Wilson Co., H. A., The, 2655 U. S. Hwy. 22, Union, N. J.
 Wilton Tool Mfg. Co., 9255 Wrightwood Ave., Chicago 14, Ill.
 Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa.
 Winchester Electronics, Inc., 15 Crescent Rd., Glenbrook, Conn.
 Winchester Repeating Arms Co., Div. of Olin Industries, Inc., New Haven, Conn.
 Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
 Winzeler Mfg. & Tool Co., 1716 W. Arcade Place, Chicago 12, Ill.
 Wire Stripper Co., 1730 Eastham Ave., Cleveland, Ohio.
 Wirt Co., 5221 Greene St., Philadelphia 44, Pa.
 Wisconsin Porcelain Co., Sun Prairie, Wis.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.
 Wood Counter Laboratory, N. 5491 Blackstone, Chicago 37, Ill.
 Woodcraft Corp., 501 Salzburg Ave., Bay City, Mich.
 Woodwelding, Inc., 3000 W. Olive Ave., Burbank, Calif.
 Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester 3, Mass.
 Worcester Pressed Steel Co., 101 Barber Ave., Worcester 6, Mass.
 Workshop Associates Div. of The Gabriel Co., Endicott St., Norwood, Mass.
 World Radio Laboratories, 740-44 W. Broadway, Council Bluffs, Iowa.
 Worner Electronic Devices, Rankin, Ill.
 Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.
 Wright Hepp Associates, Inc., 138 West St., South Hackensack, N. J.
 Wright-Zimmerman, Inc., New Brighton, Minn.
 Wright & Sons Co., William E., West Warren, Mass.
 Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.
 Wurlitzer Co., Rudolph, The, North Tonawanda, N. Y.

Xcelite, Inc., 28 Bank St., Orchard Park, N. Y.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 14, Wis.

Yardney Electric Corp., 105 Chambers St., New York 7, N. Y.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.
 Yonkers Industries, Inc., 28 School St., Yonkers, N. Y.
 York Co., Inc., Otto, 69 Glenwood Place, East Orange, N. J.
 Young Brothers Co., 1829 Columbus Rd., Cleveland, Ohio.

Z & W Machine Products Inc., Electronics Div., 5100-16 St. Clair Ave., Cleveland 3, Ohio.
 Zell Products Corp., 276-280 Main St., P. O. Box 590, Norwalk, Conn.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

Zenith Optical Co., Div. of Polan Industries, Huntington
19, West Virginia.
Zenith Optical Laboratory, 1940 Great Neck Rd.,
Copiague, N. Y.

Zenith Plastic Co., Gardena, Calif.
Zenith Radio Corp., 6001 Dickens Ave., Chicago 39, Ill.
Zephyr Products Co., 129 E. 124th St., New York 35,
N. Y.

Zero Mfg. Co., 1121 Chestnut St., Burbank, Calif.
Zierick Mfg. Corp., Beechwood & Rockdale Aves., New
Rochelle, N. Y.
Zophar Mills, Inc., 115 26th St., Brooklyn 32, N. Y.

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ALABAMA

Ack Radio Supply Co., 2205 3rd Ave., N. Birmingham 3.
Allen & Jemison Co., Tuscaloosa.
Auto Service Co., 1916 S. 4th Avenue, Birmingham.
Bessemer Radio Supply Co., 116-118 N. 20th, Bessemer.
Clark & Jones, 1601 Second Ave. S., Birmingham.
Clary Co., James W., 1713 Second Ave., Birmingham.
Forbes Distributing Co., 2600 Third Ave., S., Birmingham 5.
Hand Supply Co., 705 S. Oates St., Dothan.
Hand Wholesale Radio, 231 South St., Dothan.
Harris Supply Co., Inc., 10 N. Water St., Mobile 6.
McDavid & Co., Inc., R. P. 1430 Second Ave., Birmingham.
McGowin-Lyons Hardware & Supply Co., 113-125 N. Water St., P. O. Box 1209, Mobile.
MG Electrical Equipment Co., 203 S. 18th St., Birmingham 3.
Nelson Radio & Supply Co., 263 St. Louis St., Mobile 10.
Nolin-McInnis, Inc., 205 Commerce St., Montgomery 3.
Radio Distributing Co., 1724-5th Ave., Birmingham 3.
Radio Distributing & Supply Co., 1029 Guinee St., Anniston.
Reid Distributing Co., 1724 Fifth Ave., N., Birmingham.
Signal Radio Supply Co., 243 E. Troy St., Dothan.
Southeastern Radio Parts Co., 120 Chestnut St., Gadsden.
Southeastern Radio Parts Co., 210 Court St., Montgomery.
Steel City Supply Co., 600 N. 7th St., Birmingham.
Teague Hardware Co., 132-134 Commerce St., Montgomery.
Walther Bros Co., 113 Commerce St., Montgomery.

ALASKA

Alaska Radio Supply Co., Inc., Box 2165, Juneau.
Alaska Radio Supply, Inc., Box 84-318 8th Ave., Anchorage.
Yukon Radio Supply, Box 406 Anchorage.
Yukon Radio Supply, Box 1385, Fairbanks.

ARIZONA

Dalis Brothers, 528 E. Pierce, Phoenix.
Electrical Equipment Co. of Arizona, P. O. Box 2630, Phoenix.
Elliott Laboratories, 418 N. 4th Ave., Tucson.
Midland Specialty Co., 233 S. 11th Avenue, Phoenix.
Radio Parts of Arizona, 214 S. 11th Ave., Phoenix.
Radio Specialties & Appl. Corp., 305 E. Roosevelt, Phoenix.
Ra-Tone Electronics Co., 128 W. Washington, Phoenix.
Southwest Wholesale Radio & Appliance Co., 126 S. Second St., Phoenix.
Standard Radio Parts, 218 North First Ave., Tucson.
Western Radio Engineering Co., 1915 E. Washington St., Phoenix.

ARKANSAS

Blytheville Radio Supply, 112 S. First St., Blytheville.
Carlton Wholesale Radio, Inc., 109 W. 9th St., Little Rock.
Carter Electronic Supply Co., 805 N. 11th St., Fort Smith.
Interstate Electric Co. of Shreveport, Inc., Fort Smith.
Interstate Electric Co., of Shreveport, Inc., Texarkana.
Lavender Radio Supply Co., 522 E. Fourth St., Texarkana.
Martin Wholesale Radio Supply, 1207 W. Kingshighway, Paragould.
Southern Radio Supply, 1419 Main St., Little Rock.
Thurman Supply Co., 115 W. 11th St., Little Rock.
White Radio Supply Co., David, P. O. Box 408, 1224 Main St., Little Rock.
Wise Radio Supply, 1001 Towson Ave., Fort Smith.

CALIFORNIA

Altshuler Co., Cass, 6038 Telegraph Ave., Oakland.

Applied Electronics Co., Inc., 1246 Folsom St., San Francisco.
Arbuckle, Jack C., 417 E. 19th Street, Bakersfield.
Arbuckle, Jack C., 2330 Kern St., Fresno.
Associated Radio Distributors, 1251-3 Folsom St., San Francisco.
Barrett, Kaemper, Dealers Supply Co., 1850 Mission St., San Francisco.
Braun Corp., 2260 E. 15th St., Los Angeles 21.
Braun-Knecht-Heimann Co., 1400 16th St., San Francisco.
Brill & Co., W. D., 198 10th St., Oakland.
Brill Co., W. D., 96 Camino Encinas, Orinda.
Brown Co., C. C., 1714 Tenth St., Sacramento.
Brown Co., C. C., 61 Ninth St., San Francisco 3.
California Electronics Supply, 11801 W. Pico Blvd., Los Angeles 34.
Capitol Records, Inc., Sunset & Vine, Hollywood 28.
Channel Radio Supply Co., 523 Anacapata, Santa Barbara.
Coast Electric Co., 744 G St., San Diego 12.
Coast Electronic Supply Co., 527 W. Main St., Alhambra.
Commercial Electronics, 317 W. 7th St., Eureka.
Crescent City Radio, 840 Third St., Crescent City.
Dealers Wholesale Supply, 610 N. Ventura Ave., Ventura.
Dean Co., Fred S., 1500 West Burbank Blvd., Burbank.
Dean Co., Fred S., 969 American Ave., Long Beach 13.
DeJarnett Radio Supply, 1260 Van Ness St., Fresno.
DeJarnett Wholesale Radio Co., B. J., 223 Fulton, Fresno.
DeJarnett Wholesale Radio Co., B. J., 515 N. Hunter St., Stockton.
Dow Radio, Inc., 1759 E. Colorado St., Pasadena 4.
Dunlap Wholesale Radio Co., Inc., 826 5th St., Marysville.
Dunlap Wholesale Radio Co., Inc., 826 Fifth St., Modesto.
Dunlap Wholesale Radio Co., 1628 'S' St., Sacramento.
Dunlap Wholesale Radio Co., Carter W., 27 N. Grant St., Stockton 8.
Electric Supply Co., 140 11th St., Oakland.
Electronic Equipment Distributors, 1228 Second Ave., San Diego.
Electronic Equipment Distributors, 1123 W. Base Line, San Bernardino.
Electronic Supply Co., 149-12th St., Oakland.
Electronic Supply Co., 2615 E. Foothill Blvd., Pasadena.
Empire Electronic Supply, Inc., 37 E. Union St., Pasadena.
Federated Purchaser, Inc., 911 South Grand Ave., Los Angeles 15.
Figart's Radio Supply Co., 6320 Commodore Sloat Dr., Los Angeles 36.
Gough Industries, Inc., 424 Commercial St., Los Angeles.
Graybar Electric Co., 210 Anderson Ave., Los Angeles.
Haggerty Radio Supply, 6826 San Fernando Rd., Glendale.
Henderson Company, 630 N. Alvarado St., Los Angeles.
Henry Radio Shop, 11240 W. Olympic Blvd., Los Angeles.
Hoffman, Ira, 1125 W. Main Ave., El Centro.
Hollywood Radio Supply Inc., 5606 Hollywood Blvd., Hollywood 28.
Inland Electronic Supply, 843 Colton Ave., San Bernardino.
Kaemper-Barrett Dealers Supply Co., 1940 Ashby Ave., Berkeley.
Kaemper-Barrett Dealers Supply Co., 1850 Mission St., San Francisco.
Kemp Co., E. M., 115 R Street, Sacramento.
Kierulff & Co., 725 L St., Fresno.
Kierulff & Co., 820-830 W. Olympic Blvd., Los Angeles.
Kierulff & Co., 3791 Park Blvd., San Diego.
Kinney & Faust, 1740 Van Ness Ave., Fresno.
Lynde Radio Supply, Larry, 833 Pine Ave., Long Beach.
Mac's Radio Supply, 8320 Long Beach Blvd., South Gate.
Martin Distributing Co., 2475 E. Florence Ave., Huntington Park.
Martin Distributing Co., 2303 S. Union Ave., Los Angeles 7.
Massey's Radio Supply Co., 2992 Eighth Ave., Riverside.
Meyberg Co., Inc., Leo J. 2027 S. Figueroa St., Los Angeles 15.
Meyberg Co., Leo, 33 Gough St., San Francisco.
Meyerberg Co., Inc., Leo J., 2930 Butler Ave., Fresno.
Millers Radio & Television, 336 E. 8th St., Oakland.
Minthorne Music Co., 2920 W. Pico Blvd., Los Angeles.

Nelson Brothers Co., 630 N. Alvarado, Los Angeles.
North Hollywood Radio & TV Supply, 4333 Lanker-shim Blvd., North Hollywood.
Offenbach & Reimus Co., 1564 Market St., San Francisco.
Pacific Radio Exchange, 1407 Cahuenga Blvd., Los Angeles.
Pacific Wholesale Co., 116 N. 9th St., San Francisco.
Papal Bros., 2605 E. Fourth St., Los Angeles.
Pasadena Radio Supply, 6110 Santa Monica Blvd., Hollywood 38.
Peninsula TV & Radio Supply, 881 S. First St., San Jose.
Popkey Co., Inc., G. M., 1201 Howard St., San Francisco.
Quement Inc., Frank, 161 W. San Fernando St., San Jose.
Radio Doc, 721 S. Main St., Los Angeles.
Radio Equipment Distributors, 1340 S. Olive, Los Angeles 15.
Radio Parts Co., Inc., 1045 11th Ave., San Diego.
Radio Parts Sales, 5222 S. Vermont Ave., Los Angeles.
Radio Products Sales, Inc., 1501 S. Hill St., Los Angeles 15.
Radio Products Sales, Inc., 238 W. 15th St., Los Angeles.
Radio Specialties Co., 1956 S. Figueroa St., Los Angeles 7.
Radio & Television Equipment, 709 Cherry Ave., Long Beach.
Radio & Television Equipment, 207 Oak St., Santa Ana.
Radio Television Supply Co., 341 W. 18th St., Los Angeles 18.
Ravenscroft, Inc., A. E., 2320 S. Hill St., Los Angeles.
Sacramento Electronic Supply Co., 1219 S St., Sacramento.
San Francisco Radio & Supply Co., 1282-84 Market St., San Francisco.
Scott Radio Supply, 266 Alamitos Ave., Long Beach 2.
Shanks & Wright, 2045 Kettner Blvd., San Diego 1.
Shelley Radio Co., 2008 Westwood Blvd., Los Angeles 25.
Smith & Crawford, 1345 Mission St., San Francisco 3.
Stockton Electronics, 710 E. Main St., Stockton.
Styles & Engelman, 2255 Bancroft Ave., San Leandro.
Thompson & Holmes, Ltd., 650 Second St., San Francisco.
United Radio & Electronics Co., 1356 S. Flower St., Los Angeles.
Universal Radio Supply Co., 1729 So. Los Angeles St., Los Angeles.
Valley Electronic Supply Co., 1302 N. Magnolia Blvd., Burbank.
Valley Electronic TV Supply, 2706 Main St., Riverside.
Valley Radio Supply, 716 Baker St., Station A, Bakersfield.
Weatherford Co., R. V., 6919 San Fernando Rd., Glendale 1.
Wenger Co., E. C., 1450 Harrison St., Oakland.
Western Electromotive Co., 5544 W. Pico Blvd., Los Angeles.
Western Electronic Supply Corp., 7007 Melrose Ave., Los Angeles 38.
Western Radio & Television Supply Co., 1415 India St., San Diego 1.
Western Theatrical Equipment Co., 337 Golden Gate Ave., San Francisco 2.
Wholesale Radio & Electric Supply Co., 140 Ninth St., San Francisco.
Wresco, 140 Ninth St., San Francisco.
Yale Radio Electric, 6616 Sunset Blvd., Los Angeles.
Zach Radio Supply Co., 1426 Market St., San Francisco.

COLORADO

Electric Accessories Co., 1959 Stout St., Denver.
Henrie & Boltheff Co., 1635-17th St., P. O. Box 5110, Terminal Sta., Denver 17.
Interstate Radio & Supply Co., 1639 Tremont Place, Denver.
Murray Radio Co., 502 West Colorado Ave., Colorado Springs.
Niles Phonograph & Radio, 505-07 14th St., Denver.
Radio & Electronic Supply Co., 540 Ute Ave., Grand Junction.

Radio Products Sales Co., 1237 16th St., Denver 12.
Walker Radio Co., L. B., 854 Broadway, Denver.
Walker Radio Co., L. B., 218 W. Eighth St., Pueblo.

CONNECTICUT

Aikins Electronic Supplies, Inc., 428 Bank St., New London.
Ammrad & Co., 843 Grand Ave., New Haven.
Bond Radio Supply, The, 439 W. Main St., Waterbury 23.
Brown Co., Thomas H., 106 State St., New Haven 10.
Congress Radio Co., 207 Congress Avenue, New Haven.
Dale-Connecticut, Inc., 140 Ferry St., New Haven.
Hatry of Bridgeport, Inc., 1700 Main St., Bridgeport.
Hatry of Hartford, Inc., 203 Ann St., Hartford 3.
Hatry of New Haven, Inc., 77 Broadway, New Haven.
Hatry of Stamford, Inc., 97 Main St., Stamford.
Hatry of Waterbury, Inc., 89 Cherry St., Waterbury.
Hatry & Young of New London, Inc., 428 Bank St., New London.
Modern Radio Supply Co., Becker Ave., Kensington.
Moses Radio Electronics Co., 54 Flower St., Hartford 5.
Regent Electronic Supply Corp., 1153 Boston Post Rd., Milford.
Sam Schwartz Co., The, 124 State Street, New Haven.
Scelli & Co., R. G., 1249 Main St., Hartford 3.
Stamford Radio Supplies, 562 Atlantic Ave., Stamford.
United Radio Supply, 47-53 E. Main St., New Britain.
Universal Radio Supply Co., Inc., 61 E. Main St., New Britain.
Waldhaus, L. N., 1132 Norman St., Bridgeport.

DELAWARE

Almo Radio Co., 6th & Orange Sts., Wilmington.
Radio Electric Service Co. of Pa., Inc., 4th & Tatnall Sts., Wilmington.
Wilmington Electrical Spec. Co., 405 Delaware Ave., Wilmington.

DISTRICT OF COLUMBIA

American Amplifier & Telev. Corp., 1111 19th St., N. W., Washington.
Capitol Radio Wholesalers, 2120 14th St., N. W., Washington.
Electronic Wholesalers, Inc., 2345 Sherman Ave., N. W., Washington 9.
General Electric Supply Co., 705 Edgewood St., N. E. Washington.
George's Radio Co., 1111 H St., N. E., Washington.
George's Radio Co., 2013 M St., N. W., Washington.
Kenyon Radio Supply Co., 2214 14th St., N. W., Washington 9.
Rucker Radio Wholesalers, 1312 14th St., N. W., Washington.
Silberne Radio & Elec. Co., 3308-10 Eleventh St., N. W., Washington 10.
Southern Wholesalers, Inc., 707 Edgewood St., N. E., Washington 17.
Star Radio Co., 409-11th St., N. W., Washington.

FLORIDA

Acme Electronics Distributors, 811 Main St., Jacksonville.
Cooper Radio Co., 648 Second Ave., S., St. Petersburg.
East Coast Radio & Television Co., 1932 N. W. Miami Court, Miami.
Electric Supply Co., Inc., 106 S. Franklin St., Tampa 1.
Electronic Supply Co., 61 N. E. 9th St., Miami.
Emerson Radio of Florida, 131 N. E. 10th St., Miami.
Emerson Radio of Florida, 209 S. Franklin St., Tampa.
Fetterpuff, G., 22-31 W. Beaver St., Jacksonville.
Flagler Radio Co., 1068 W. Flager St., Miami.
Goddard Distributing Co., 2113 S. Andrews, Fort Lauderdale.
Goddard Distributors, Inc., 1309 N. Dixie, W. Palm Beach.
Grice Radio & Electronic Supplies, 358 E. Wright St., Pensacola.
Gulf Electric Supply, 115 E. Gregory St., Pensacola.
Hammond-Adams Co., 228 Volusia Ave., Daytona Beach.
Hammond-Adams, Inc., 9 S. Terry St., Orlando.
Herman Radio Supply Co., 1745 N. E. Second Ave., Miami 36.
Kinkade Radio Supply Co., 1402-04 Laura Street, Jacksonville.
Kinkade Radio Supply Co., 402 W. Fortune St., Tampa.
Morley Radio Co., 944 Main St., Sarasota.
Radio Accessories Co., 1054 S. Florida Ave., Lakeland.
Radio Accessories Co., 62 Church, Orlando.
Radio Accessories Co., 134 N. Franklin St., Tampa.
Radio Parts Co., 712 Main St., Jacksonville.
Radio Parts, Inc., 325 N. W. 3rd Ave., Miami.
Sea Coast Appliance Dists., Inc., 36 NE 21st St., Miami.
Southeast Audio Co., 930 W. Adams Ave., Jacksonville.
Southern Hardware & Bicycle Co., 11 S. Newman St., Jacksonville.
Thurrow Distributors, Inc., 15-17 E. Church St., Jacksonville.
Thurrow Distributors, Inc., 2207 N.E. 2nd Ave., Miami.
Thurrow Distributors, Inc., 625 W. Central Ave., Orlando.
Thurrow Distributors, Inc., 739 N. Monroe St., Tallahassee.
Thurrow Distributors, Inc., 134-136 S. Tampa St., Tampa.
Thurrow Distributors, Inc., 308-10 S. Olive Ave., Box 3002, West Palm Beach.
Walder Radio & Appliance, 1809 N. E. Second Avenue, Miami 36.
Welch Radio Supply, 408 Ninth St., S., St. Petersburg.

GEORGIA

Atlanta Phonograph Co., 27 Pryor St., N. W., Atlanta.
Aviation Supply Corp., P. O. Box 512, Hapeville.
Beck & Gregg Radio Co., 217 Luckie St., N. W., Atlanta.
Concord Radio Corp., 265 Peachtree St., Atlanta 3.
Economy Auto Stores, Inc., 1130 Bankhead Highway, P. O. Box 5078, Atlanta.
Electrical Wholesalers, Inc., 229 W. Whitehall St., Atlanta.
Electronic Distributing Co., 754 Ponce de Leon Place, N. E., Atlanta 5.
Garvin Electric Co., 69 Forsyth St., N. W., Atlanta 5.
Georgia Appliance Co., 1405 Spring St., N. W., Atlanta.
Guy White Radio Co., 654 Mulberry St., Macon.
Hatcher Co., A. S., 596-98 Third St., Macon.
Prestwood Electronics Co., 708 Reynolds St., Augusta.
Radio Sales & Service Co., 1326 First Ave., Columbus.
S. & H. X-Ray Company, 501 Peachtree St., N. E., Atlanta.
Southeastern Radio Parts Co., 442 W. Peachtree St., Atlanta.
Southeastern Radio Parts Co., 38 Montgomery St., Savannah.
Specialty Distributing Co., 104 Pine Ave., Albany.
Specialty Distributing Co., 425 Peachtree St., Atlanta.
Specialty Distributing Co., 644 Reynolds St., Augusta.
Specialty Distributing Co., Inc., 513 Arch St., P. O. Box 815, Macon.
Specialty Dist. Co., 233 E. Broughton St., Savannah.
Yancey Co., Inc., 1500 Northside Dr., Sta D., P. O. Box 4034, Atlanta.
Yancey Company, Inc., The, 666 Indian St., Savannah.

IDAHO

Bill Meyers, Wholesale, 240-248 S. Arthur, Pocatello.
Craddock's Radio Supply, 1522 State St., Boise.
Kopke Electronics Co., 119 Peasley St., Boise.
Schwendian Wholesale Distributors, 380 E. St., Idaho Falls.

ILLINOIS

Allen Electric Co., 18 E. North St., Danville.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7.
ADV. PG. 542.
Alverson Sales Co., 208 E. Front St., Bloomington.
Arbuckle, J. W., 626 W. Oakland Ave., Bloomington.
Bowman & Co., J. G., 513 E. 75th Street, Chicago 19.
Broadwin Television & Radio, Inc., 5004-6 North Broadway, Chicago 40.
Bruce Co., Harold, 120 N. 1st St., Springfield.
Central Scientific Co., 1700 Irving Park Rd., Chicago.
Chauncey's Distributing Corp., 1327 W. 79th St., Chicago.
Chauncey's Inc., 4737 W. Chicago Avenue, Chicago 51.
Chicago Apparatus Corp., 1735 N. Ashland Avenue, Chicago.
Clayton Radio Co., 2749 N. Ashland Ave., Chicago.
Concord Radio Corp., 901 Jackson Blvd., W., Chicago.
Cooper Supply Co., 935 Main Street, Quincy.
Electronic Publishing Co., 180 N. Wacker Drive, Chicago.
Fox Electric Supply Co., 67-69 N. State Street, Elgin.
Gates Radio Co., 123 Hampshire, Quincy.
H & H Electronic Supply, Inc., 510 Kishwaukee St., Rockford.
Herberger Radio Supply, P. O. Box 1197, Peoria 1.
Hyland Electrical Supply Co., 700 W. Jackson Blvd., Chicago.
Illinois Appliance Co., 407 W. First Street, Dixon.
Joliet Radio Supply Co., Inc., 460 N. Chicago St., Joliet.
Klaus Radio & Electric Co., 707 Main Street, Peoria 2.
Lamprey Radio Supply, 802 N. McLeansboro St., Benton.
Lofgren Distributing Co., 1202 4th Avenue, Moline.
Loughane & Company, 804 N. Water Street, Decatur.
Lukko Sales Corp., 5024 Irving Park Rd., Chicago.
Lurtz Electric Co., 210 N. Illinois St., Belleville.
Melvin Electronics Co., 321 Madison St., Oak Park.
Mid West Associated, 506 Walnut St., Rockford.
Mid West Electronics, 6907 N. Western Ave., Chicago.
Montgomery Ward & Co., W. Chicago Ave. & Larrabee St., Chicago.
Mort's Radio Shack, 630 W. Randolph St., Chicago.
Moulden Distributing Co., Tuscola.
Nagel, Inc., Arthur, 925 E. 55th St., Chicago.
Nation Wide Radio Co., 572 Randolph St., Chicago.
National Theatre Supply, 1325 Wabash Ave., Chicago.
Newark Electric Co., Inc., 223 W. Madison Street, Chicago 6.
Pilgrim Distributing Co., 910 W. Jackson Blvd., Chicago.
Radio Doctors, 314 N. Hickory, Campaign.
Radio Doctors Supply House, 220 E. Station St., Kankakee.
Radio Parts Co., 612 W. Randolph St., Chicago 6.
Radio Parts Outlet, Inc., 4305 Lincoln Avenue, Chicago 18.
Raddolek Co., 601 W. Randolph St., Chicago 6.
Ross Radio Co., 1915 Main St., Peoria 5.
Spiegel, Inc., 1061 W. 35th St., Chicago 9.
Star Electronic Distributors, Inc., 7736 S. Halsted St., Chicago 20.
Triangle Industries Corp., 600 W. Adams Street, Chicago.
Tri-City Radio Supply, 1919 Fourth Avenue, Rock Island.
Wabash Electronics, 700 Plum St., Mt. Carmel.
Warren Radio Co., 801 S. Adams, Peoria.
Walker-Jimieson, Inc., 811 S. Western Avenue, Chicago 12.
Wilkes-Anderson Company, 4525 West Division St., Chicago.
Wilson Supply Co., 108 W. Jefferson Street, Springfield.
York Radio Supply Corp., 801-805 N. Broadway, Decatur.

INDIANA

Archer & Evinger, 1348 Wabash Avenue, Terre Haute.
Associated Distributors, Inc., 210-214 S. Meridian Street Indianapolis 4.

Bloomington Store, 1300 S. Rogers St., Bloomington.
Bowman & Co., J. G., 103 Lafayette Street, Valparaiso.
Broadwin Television & Radio, Inc., 615 E. State St., Hammond.
Castrup's Radio Service, 1014 W. Franklin, Evansville.
Clingaman Radio Co., 814 W. Main, Peru.
Commercial Sound & Radio Co., 528 E. Colfax Avenue, South Bend.
Cosmopolitan Radio Co., 528 Washington Ave., Gary.
Fort Wayne Electronic Supply, 223 E. Main St., Fort Wayne.
Graham Co., Inc., Phillip E., 2606 W. Michigan Street, Indianapolis 22.
Graham Electronics Supply Co., 102 S. Pennsylvania St., Indianapolis 4.
Hub Distributors, 106 N. Main Street, Crown Point.
Lafayette Radio Supply, Inc., 408 E. North Street, Lafayette.
Lakeland Radio Supply Co., 525 Southwest St., Angola.
Meunier Radio Supply Company, 524 N. Illinois Street, Indianapolis.
Myers Radio Supply, 115-17 W. 22nd St., Marlon.
Ohio Valley Sound Co., 11 N. W. Riverside Drive, Evansville.
Pemberton Laboratories, 236 E. Columbia St., Fort Wayne 2.
Radio Distributing Co., 1013 N. Capitol Avenue, Indianapolis.
Radio Distributing Co., 432 S. Carroll Street, South Bend.
Radio Electronic Supply Co., 1419 Cameron Street, Lafayette.
Radio Supply of Muncie, 305 N. Madison, Muncie.
Radio & TV Dist. Co., 717 S. 5th St., Richmond.
Rinehart, Inc., 511-13 Main St., Richmond.
Rodefelf Co., 614 N. Capital Ave., Indianapolis.
Rodefelf Co., 96 W. Main St., Richmond.
Seybert's Radio Supply Co., 1331 Main Street, Anderson.
Stansifer Radio Co., 343 S. Rogers St., Bloomington.
Terre Haute Radio Co., 501 Ohio St., Terre Haute.
Van Sickle Radio Supply Co., 102 S. Pennsylvania St., Indianapolis.
Warren Radio Co., 1716 S. Harrison St., Fort Wayne.
Wesco Radio Parts, 428 Penn St., Evansville.
Williams Co., H. A., 334 5th St., Columbus.

IOWA

Boe Distributing Co., 498 N. Grandview Avenue, Dubuque.
Duke's Radio Company, 209 Sixth Street, Sioux City.
Farnsworth Radio & Television Co., 623 Jefferson, Waterloo.
Gifford-Brown, Inc., 106 1st Street, SW, Cedar Rapids.
Gifford-Brown, Inc., 1216 Grand Avenue, Des Moines 9.
Iowa Radio Corporation, 1212 Grand Avenue, Des Moines 9.
Ken-Elis Radio Supply Co., 810 N. 9th, Fort Dodge.
Midwest-Timmermann Co., 114 Western Avenue, Davenport.
Onthank Co., G. W., 10th and Mulberry, Des Moines.
Power City Radio Co., 513 Seventh St., Sioux City.
Radio Trade Supply Co., 1224 Grand Avenue, Des Moines 9.
Radio Trade Supply Corp., 115 W. Second, Ottumwa.
Ray-Mac Supply Co., 613 Water Street, Waterloo.
RCA Victor Distributing Corp., 1235 W. 5th Street, Davenport.
Siddles Co., 912 Locust Street, Des Moines.
Sioux City Radio & Appliance Co., 210 W. 7th Street, Sioux City 16.
Sorensen Co., H. E., 100 S. W. First St., Des Moines.
Tri City Radio Supply, Inc., 320 E. 4th St., Davenport.
Union Supply Co., 4th & Washington, Burlington.
World Radio Laboratories, Inc., 740-46 W. Broadway, Council Bluffs.

KANSAS

Acme Radio Supply, 516 Quincy Street, Topeka.
Amateur Radio Equipment Co., Inc., 1203 E. Douglas Street, Wichita.
Costelow Co., Inc., John A., 125 Kansas Avenue, Topeka.
Excel Distributors, 118 W. 2nd Street, Wichita 2.
Four-State Radio & Supply Co., 227 Santa Fe, Salina.
Interstate Electronics Supply Co., 230 Ida Street, Wichita 1.
Overton Electric Co., Inc., 522 Jackson Street, Topeka.
Pittsburg Radio Supply Co., 212 S. Broadway, Pittsburg.
Radio Supply Co., 1125-27 E. Douglas, Wichita.
RCA Victor Distributing Corp., 351 N. Water, Wichita.
Western Distributors, 227 N. Santa Fe, Salina.

KENTUCKY

Apex Distributing Co., 506 York St., Newport.
Ashland Radio Supply Co., 2125 Winchester Ave., Ashland.
Burks & Co., P. I., 911 W. Broadway, Louisville 3.
Central Electronic Supply Co., Inc., 203 W. 4th St., Owensboro.
Crescent Radio Supply Co., 212 W. 10th St., Bowling Green.
Electronic Distributors, P. O. Box 55, Lexington.
Ewald Distributor Co., 911 W. Jefferson, Louisville 3.
Kentucky Radio Supply Co., 376 E. Main St., Lexington.
Miller, Barney, 239 E. Main Street, Lexington.
Peerless Electronic Equipment Co., 912-914 S. 2nd Street, Louisville 3.
R & K Distributing Co., 801 W. St. Catherine St., Louisville.
Radio Equipment Co., 480 Skain Avenue, Lexington 34.
Universal Radio Supply Co., 533 S. Seventh St., Louisville 3.
West Kentucky Electronic Supply Co., 1205 Broadway, Paducah.

LOUISIANA

Allen Supply Co., Wm. B., 1601 Orleans St., New Orleans 16.
Autiotronics Supply Co., 2100 Benefit St., New Orleans 22.
Bell Radio Supply Co., 2625-27 Tulane Ave., New Orleans.
Central Radio Supply, 509 Monroe St., Alexandria 1.
Columbia Radio & Supply Co., 3940 3rd St., New Orleans 13.
Crescent Radio & Supply Co., 1428 Baronne St., New Orleans.
Dunckelman-Pace, 1417 Louisiana Ave., Shreveport.
Electrical Supply Co., 21 Magazine St., New Orleans.
Electronic Supply Co., 1753 N. 21st St., Baton Rouge.
Electronic Supply & Engineering Co., 205-207 N. Broad Ave., New Orleans.
Electronics Co., Inc., The, 936-938 Milam St., P. O. Box 1494, Shreveport.
Hale & McNeil, Cor. N. 3rd & Pine Sts., Monroe.
Interstate Electric Co., 1001 S. Peters, New Orleans.
Interstate Electric Co., 616 Spring St., Shreveport.
Koelmay Sales Co., 220 Crockett St., Shreveport.
Louisiana Radio & Television Dist., 1042 N. Boulevard, Baton Rouge.
Lynch & Co., Inc., S. H., 832 Baronne St., New Orleans.
Oie Miss Supply, 901 Carondelet St., New Orleans.
Pee Jay Radio Electric, Inc., 2306 Tulane Ave., New Orleans.
Radio Electronic Supply, 3004 Cameron St., Lafayette.
Radio Parts, Inc., 807 Howard St., New Orleans.
Ralph's Radio Electronic Supply, 3004 Cameron St., Lafayette.
Schneider & Sons, Inc., F. H. 215 Lake St., Lake Providence.
Shuler Supply Co., 415 Dryades St., New Orleans.
Southern Radio Supply, 1900 Tulane Ave., New Orleans 19.
Walther Bros. Co., Inc., 714 Howard Ave., New Orleans.
Wholesale Radio Equipment Co., 239 Bilbo St., Lake Charles.

MAINE

Brown Co., Frank M., 8-16 Free St., Portland.
Commercial Distributors, 35 Commercial St., Portland.
Commercial Electronics Service, 103 Chapel St., South Portland.
Cressey & Allen, 35 Commercial Street, Portland 6.
Maine Electronic Supply Corp., 13 Deer Street, Portland.
Radio Service Laboratory, 76 Exchange Street, Bangor.
Radio Service Laboratory, 1004 Congress St., Portland 3.
Radio Supply Co., Inc., 28 Cross Street, Auburn.

MARYLAND

Art Craft Electric Supply Co., Cor. Calvert & Baptist Sts., Salisbury.
Berman, O'Henry O., 12 E. Lombard St., Baltimore.
D & H Distributing Co., 25 S. Liberty Street, Baltimore.
Dealers Radio Supply Co., 219 Highland Ave., Salisbury.
Kann-Ellert Electronics Inc., 9 South Howard Street, Baltimore.
Lytron Distributing Co., 1338 N. North St., Baltimore.
Radio Electric Service Co., 3 N. Howard St., Baltimore 1.
Rucker Radio Wholesalers, 8049 13th St., Silver Spring.
Spartana, A. R., 239 N. Gay St., Baltimore.
Wholesale Radio Parts Co., Inc., 311 W. Baltimore St., Baltimore 1.
Zimmerman Wholesalers, 162 Bedford St., Cumberland.
Zimmerman Wholesalers, 114 E. Washington St., Hagerstown.

MASSACHUSETTS

Beckman & Co., C. E., 11-35 Commercial St., New Bedford.
Burke Co., J. H., 37-39 Brighton Ave., Boston.
Cushing, T. F., 349 Worthington St., Springfield 3.
Dean & Co., David B., 85 Cohannet St., Taunton.
DeMambo Radio Supply Co., Inc., 1111 Commonwealth Ave., Boston 15.
DeMambo Radio Supply Co., Inc., 222 Summer St., Worcester.
Eastern Co., 620 Memorial Dr., Cambridge 39.
Electrical Supply Corp., 1739 Massachusetts Ave., Cambridge 40.
Flint Radio Co., 73 Troy St., Fall River.
Gelotte Claus, Inc., 1290 Massachusetts Ave., Cambridge.
Gerber Radio Supply Co., 1900 Columbus Ave., Roxbury 19.
Hatry & Young of Fitchburg, Inc., 390 Water St., Fitchburg.
Hatry & Young of Lawrence, Inc., 262 Lowell St., Lawrence.
Hatry & Young of Mass., Inc., 811 Boylston St., Boston.
Hatry & Young of Springfield, Inc., 169 Spring St., Springfield.
Herman Co., Louis M., 885 Boylston St., Boston.
Mayer, A. W., 895 Boylston St., Boston 15.
McCartin Co., Frank P., 181 Market St., Lowell.
Melrose Sales Co., 407 Franklin St., Melrose 77.
Pittsfield Radio Co., 44 West St., Pittsfield.
Radio Electronic Sales Co., 52 Chandler St., Worcester 2.
Radio Maintenance Supply Co., 80 Thomas St., Worcester.
RADIO SHACK CORP., 167 Washington St., Boston. ADV. PG. 564.
Radio Wire Television, Inc., 110 Federal St., Boston.
Regent Sales, Inc., 236 Chestnut St., Springfield.
Ross Co., E. A., 1663 Purchase St., New Bedford.
Ross Co., E. A., 73 Troy St., Fall River.
Sager Electrical Supply Co., 201 Congress St., Boston.
Soundco Electronic Supply Co., 147 Dwight St., Springfield.
Springfield Radio Co., 93 High St., Holyoke.

Springfield Radio Co., Inc., 405 Dwight St., Springfield.
Springfield Sound Co., 147 Dwight St., Springfield.
Tarbell Watters Co., West St. & Clapp Ave., Pittsfield.
Tarbell Watters Co., 144 Chestnut St., Springfield.
Ware Radio Supply Co., 913 Centre St., Brockton 11.
Weston Electronic Sales Corp., Weston 93.
Willett Radio Service Inc., 11 Court St., Natick.

MICHIGAN

Brenklight Projection Co., 6545 St. Antoine, Detroit.
Bursa Radio Co., 853 Grandview Ave., S. W., Grand Rapids.
Duffy & Co., M. N., 2040 Grand River Ave., Detroit 26.
Earle Appliance Distrs. Inc., 814 First Ave., North Escanaba.
Electric Products Sales Co., 427 E. Michigan Ave., Lansing 29.
Electronic Supply Corp., 94 Hamblin St., Battle Creek.
Electronic Supply Corp., 906 E. Michigan Ave., Kalamazoo.
Electronic Supply Corp., 248 E. Pike St., Pontiac.
Felton Radio Co., 1603 Ludington, Escanaba.
Ferguson Radio Supply Co., 622 W. Baltimore, Detroit 2.
Fitzpatrick Electric Supply Co., Inc., 444 Irwin St., Muskegon.
Fulton Radio Supply Co., 1208 Greenwood Ave., Jackson.
Gardner Radio Supply Co., 332 River St., Manistee.
General Motors Corp., United Motors Service Div., 3044 W. Grand Ave., Detroit.
Glendale Supply Co., 12866 Woodward Ave., Detroit.
Hi-Park Distributors, 155 Labelle, Detroit 3.
K-L-A Laboratories, Inc., 7422 Woodward Ave., Detroit 2.
Lifsey Distributing Co., 726-30 N. Saginaw, Flint 3.
Morley Brothers, 5943 Second Ave., Detroit 2.
Morley Brothers, 25 Ottawa Ave., W. Grand Rapids.
Morley Brothers, Harrison Rd., E. Lansing.
Morley Brothers, 115-129 N. Washington Ave., Saginaw.
Northwest Radio of Michigan, 435 Tamarack St., Laurium.
Offenhauer Company, 227 N. Washington, Lansing.
Orem Distributing Co., 801 E. Genesee, Saginaw 11.
Radio Electronics Supply Co., 1112 W. Warren, Detroit 1.
Radio Electronic Supply Co., 505 Jefferson Ave., S. E., Grand Rapids 3.
Radio Parts Co., Water & Millard Sts., Saginaw.
Radio Parts Inc., 720 Division Ave. S., Grand Rapids.
Radio Specialties, 456 Charlotte St., Detroit 1.
Radio Supply & Engineering Co., Inc., 85 Selden Ave., Detroit 1.
Radio Tube Merchandising Co., 508 Clifford St., Flint 3.
Ralston Co., Ralph M., 201 N. Park St., S., Kalamazoo.
Rissi Electronic Supply Co., 1112 West Warren, Detroit.
Shand Radio Specialties, 203 W. Kearsley, Flint 3.
Stevens Radio Parts, 713 Portage St., Kalamazoo.
Straits Distributors, Inc., 200 S. Main St., Sheboygan.
Warren Radio Co., 713 Portage St., Kalamazoo 7.
Wedemeyer Electronics Supply Co., 213-217 N. Fourth Ave., Ann Arbor.
Wedemeyer Electronic Supply Co., 2005 E. Michigan Ave., Lansing.
West Side Radio Supply, 8140 Michigan Ave., Detroit 10.
Wholesale Radio Co., 317 S. Division St., Grand Rapids.

MINNESOTA

Bauman Co., 3033-35 Lyndale Ave. S., Minneapolis 8.
Bonn Co., Lew, 228 E. Superior St., Duluth.
Bonn Co., Lew, 67 South 12th St., Minneapolis 4.
Bonn Co., Lew, 141-147 W. 7th St., St. Paul 2.
Catalog Service Co., The, 2020 Douglas Drive, Minneapolis.
Electronic Center, Inc., 107 Third Ave. N., Minneapolis.
Electronic Distributing Co., 856 Raymond Ave., St. Paul 4.
Elliott & Hanson Radio & TV Supply, 13 SW. 4th St., Rochester.
Hall Electric Co., 566 N. Robert St., St. Paul 1.
Hayer Co., E. C., 300 Washington Ave., N., Minneapolis.
Northwest Radio, 123 E. First St., Duluth 2.
Northwest Radio & Electronic Supply Co., 52 S. 12th St., Minneapolis 4.
Northwest Radio & Electronic Supply Co., 194 W. 4th St., St. Paul 2.
Popkey Co., G. M., 206 E. First St., Duluth.
Radio Electric Supply Co., 2451 Nicollet Ave., Minneapolis.
Radio Maintenance Co., 3016½ 27th St., S., Minneapolis 6.
S. M. Supply Co., 321 First Ave., SW, Rochester.
Southern Minnesota Supply Co., Cor. 2nd and Main St., Mankato.
Stark Radio Supply Company, 109 S. Lake St., Duluth.
Stark Radio Supply Co., 71 S. 12th St., Minneapolis 4.
Stark Radio Supply Co., 246 W. Kellogg Blvd., St. Paul.
Sterling Electric Co., 33 South Main St., Minneapolis.
Walker & Co., George T., 324 Fifth Avenue, South, Minneapolis.

MISSISSIPPI

Cabell Electric Co., 922 S. Farish St., Jackson.
Ellington Radio, Inc., 816 South Gallatin St., Jackson.
Goyer Supply Co. (Home Appliance Div.), 805 Alexander, Greenville.
Griffin Radio & Supply Co., P. O. Box 1404, Meridian.
Industrial Suppliers, Inc., Radio Div., Highway 80, Jackson.
Nelson Radio & Supply, 816 W. Howard, Bilox.
Radio Supply Co., 909 24th Ave., Meridian.
Ryan Supply Co., 508-514 E. Pascagoula St., Jackson.
Ryan Supply Co., 814 21st, NE, Meridan.
Southern Distributors, Inc., 330 W. Capitol St., Jackson.
Swann Distributing Co., Inc., 717 W. Monument, Jackson.

MISSOURI

Acme Radio Supply, 110 N. 9th St., St. Joseph.

Ashe Radio Co., Walter, 1125 Pine St., St. Louis.
Bratherson M., 515 N. Beyers St., Joplin.
Brown Radio Co., Tom, 3924 Washington Ave., St. Louis.
BURSTEIN-APPLEBEE CO., 1012 McGee St., Kansas City. ADV. PG. 599.
Central Missouri Distributing Co., 324 Capital St., Jefferson City.
Ebinger Radio & Supply Co., 2211 Gravois Ave., St. Louis 4.
Electro-Crafts, Div. of North Kansas City Electric Co., 1303-1305 Swift St., N. Kansas City.
Four State Radio & Supply Co., 201 Main, Joplin.
Gordon Co., J. C., 1118 Pine St., St. Louis 9.
Henry Radio Co., 211-215 N. Main St., Butler.
Henshaw Radio Supply, 3619 Troost Ave., Kansas City.
Hollander & Co., Inc., 3900 W. Pine St., St. Louis.
Interstate Supply Co., 10th & Walnut Sts., St. Louis.
Larrimore Sales Co., P. O. Box 1234, St. Louis 1.
Manhattan Radio & Equipment, Inc., 1732 Grand Ave., Kansas City 8.
McGee Radio Co., 1422 Grand Ave., Kansas City.
Napper Radio Company, 317 Washington Blvd., St. Louis.
Potter Radio Co., 1312 McGee St., Kansas City 6.
Raddiolab, 1612 Grand Ave., Kansas City 8.
Radonics, 5040 Easton Ave., St. Louis.
Radonics, 2218 S. Jefferson St., St. Louis.
Reed Radio & Supply, Harry, 805 Boonville Ave., Springfield.
St. Joseph Radio & Supply Co., 922-24 Francis St., St. Joseph.
Stout Radio Supply, 700 Boonville, Springfield.
Suedekum Electronic Supply Co., 902 S. Sprigg St., P. O. Box 221, Cape Girardeau.
Tri-State Radio & Supply Co., 118 Bartlett St., Poplar Bluff.
Van Sickle Radio Co., 1113 Pine St., St. Louis 1.
Walters Radio Supply, 3645 Main, Kansas City.

MONTANA

Electronic Supply Co., 214 Eleventh St., Billings.
Lindgren Co., 109 Central Ave., Great Falls.
Northwest Distributors, S., 509 Higgins Ave., Missoula.
Northwestern Auto Supply Co., 420 N. Broadway, Billings.
Smith's Supply Co., 425 S. Arizona St., Butte.
Smith Supply Co., 114 First Ave., N., Great Falls.
Smitty's Electronics, 126 W. Broadway, Butte.
Valley Motor Supply Co., 512-514 First Ave., S., Great Falls.

NEBRASKA

Hicks Radio Co., 1422 '00' St., Lincoln 8.
J B Distributing Co., 2855-57 Farnam St., Omaha 2.
Joachim Radio Supply, 1913 Broadway, Scottsbluff.
Leuck Radio Supply Co., 243 S. 11th St., Lincoln.
Noll Co., H. C., 2226 Harney St., Omaha.
Omaha Appliance Co., 17 St. Mary's St., Omaha.
Radio Equipment Co., 282-22 Farnam St., Omaha.
Sidles Co., 508 S. 19th St., Omaha.

NEVADA

Metcalfe's Radio Supply, 819 Ogden St., Las Vegas.
Saviers Electrical Products Corp., Las Vegas.
Saviers Electrical Products Corp., 640 Sierra, Reno.

NEW HAMPSHIRE

American Radio Corp., 6th & Chestnut Sts., Dover.
DeMambo Radio Supply Co., Inc., 1308 Elm St., Manchester.
Evans Radio, 10 Hills Ave., P. O. Box 312, Concord.
Radio Service Laboratory, 670 Chestnut St., Manchester.

NEW JERSEY

Admiral Corp. of Newark, 497-511 N. J. Railroad Ave., Newark.
Allen & Hurley, 25 S. Warren St., Trenton 10.
All State Distributors, 30 Warren Place, Newark.
Almo Radio Co., 4401 Ventnor Ave., Atlantic City.
Almo Radio Co., 1133-35 37 Haddon Ave., Camden.
American Distributing Co., 327 Hudson St., Hackensack.
American Distributing Co., 6335 Hudson Blvd., North Bergen.
Apollo Distributing Co., 15 Shipment St., Newark 2.
Continental Sales Co., 521 Bloomfield Ave., Newark.
Cooper Sales Co., Factory & Cooper Sts., Trenton.
Dale-New Jersey, Inc., 79 Lock St., Newark.
Eastern Radio Corp., 1055 Main Ave., Clifton.
Economy Electronics, 624 Ridge Rd., Lyndhurst.
Electronic Marketers, Inc., 415 Halsey St., Newark 2.
Federated Purchaser, Inc., 114 Hudson St., Newark.
General Radio Co., 207 N. Broadway, Camden.
General Radio Supply Co., 600 Penn St., Camden.
Hallmark Electronic Corp., 592 Communipaw Ave., Jersey City.
Hallmark Electronics Corp., RDS 37 Lincoln Hwy., New Brunswick.
International Distributing Co., 821 S. Orange Ave., East Orange.
Jersey Electronic Dist. Co., 301 Grand St., Paterson 1.
Joe's Radio Shop, 67-69 S. Pearl St., Bridgeton.
Kearns, Inc., Harrisburg & Atlantic Aves., Atlantic City.
Krich-New Jersey Inc., 422-432 Elizabeth Ave., Newark 8.
Lippman & Co., Aaron, 88-107 Newark St., Newark.
M & H Sporting Goods Co., 1832 Atlantic Ave., Atlantic City.
Monmouth Radio Supply, 404 Shrewsbury Ave., Red Bank.
Mytelka & Rose, Inc., 1020 Broad St., Newark.

Nidisco-Cliffside, Inc., 658 Anderson Ave., Cliffside.
 Nidisco-Jersey City, Inc., 713 Newark Ave., Jersey City 6.
 Nidisco Passaic, Inc., 294 Passaic St., Passaic.
 Nidisco-Trenton, Inc., 126 S. Warren St., Trenton.
 O'Loughlin & Co., Inc., T. A., 90 Washington St., Newark.
 Radio Electric Service Co. of Pa., Inc., 452 N. Albany Ave., Atlantic City.
 Radio Elect. Serv. Co. of Pa., 513-515 Cooper St., Camden.
 Radio Wire Telev. Inc., 24 Central Ave., Newark.
 Teldisco, Inc., 444 William St., E. Orange.
 Variety Electric Co., Inc., 468 Broad St., Newark 2.
 William Radio Supply Co., 1861 Woodbridge Ave., New Brunswick.
 Williams Co., Carl B., 154 S. Main St., Phillipsburg.

NEW MEXICO

Miller Supply Co., 211 W. Coal St., Albuquerque.
 Radio Equipment Co., 523 E. Central Ave., Albuquerque.
 Walker Radio Co., Inc., 114 W. Granite, P. O. Box 921, Albuquerque.

NEW YORK

Ace Electronics Co., 2610 E. 16th St., Brooklyn.
 Acme Electronics, Inc., 74 Willoughby St., Brooklyn 1.
 Adironack Radio Supply, 32 Guy Park Ave., Amsterdam.
 Adironack Radio Supply, 54 Market St., Amsterdam.
 Admiral Corp. of New York, 621 W. 54th St., New York.
 Arace Electronic Distributors, 25-27 Henry St., Kingston.
 ARCO ELECTRONICS, INC., 103 Lafayette St., New York. ADV. PG. 322.
 ARROW ELECTRONICS, INC., 82 Cortlandt St., New York 1. ADV. PG. 138.
 Baldwin-Hall, Inc., 475 Oswego Blvd., Syracuse.
 Barclay-New York, Inc., 139 Cedar St., New York.
 Barker Roses & Kimball, Inc., 511 Baldwin St., Elmira.
 Beacon Electronics Inc., 14 Catherine St., Utica.
 Beacon Electronic Distb., 108 Lincoln Bldg., Watertown.
 Benray Distributing Co., 485 Coney Island Ave., Brooklyn.
 Berndt, W. E., 653-55 S. Warren St., Syracuse.
 Bickford Bros. Co., 1209 Broadway, Buffalo.
 Bickford Bros. Co., 208 St. Paul St., Rochester 4.
 Boro Electronics, Inc., 69-18 Roosevelt Ave., Woodside.
 Brahan Electrical Supply Co., John, 304 W. 55th St., New York.
 Brujac Electronic Corp., 103 Lafayette St., New York.
 Bruno-New York, Inc., 460 W. 34th St., New York 1.
 Buchman Radio Co., 492 Atlantic Ave., Brooklyn 17.
 Calvert Electronics, Inc., 1947 Broadway, New York 23.
 Certified Radio Supply, Montgomery Rd. Rte. 84, Middletown.
 Chamrose Radio Distributors, Inc., 170-16 Jamaica Ave., Jamaica 3.
 Chief Electronics, Inc., 248 Washington St., Newburgh.
 Chief Electronics, 104 Main St., Poughkeepsie.
 Commercial-Radio-Sound Corp., 570 Lexington Ave., New York 22.
 Concord Radio Co., 55 Vesey St., New York 7.
 Consolidated Radio Sales Corp., 768 Amsterdam Ave., New York 25.
 Continental Theatre Accessories Inc., 325 W. 44th St., New York.
 Crosley Distributing Corp., 559 West 35th St., New York.
 DAGE CORP., 40 Hudson St., New York 13, N. Y. ADV. PG. 545.
 Dale Distributing Co., Inc., 40 E. 32nd St., New York.
 Dalis, Inc., H. L., 175 Varick St., New York 14.
 Dare's Radio Service, 22 E. Genesee St., Auburn.
 Davega Stores Corp., 76 9th Ave., New York.
 Davis Electronics Corp., 204 Main St., Hempstead.
 Davis Radio Distributing Co., 66 E. 3rd St., Mt. Vernon.
 Dvmac, Inc., 2329 Main St., Buffalo 14.
 Electric City Radio Supply, 1566 State St., Schenectady.
 Electronic Equipment Co., 2912 Atlantic Ave., Brooklyn.
 Electronic Laboratories & Supply Co., 1415 Oriskany St., West, Utica 4.
 ELECTRO-TECH EQUIPMENT CO., INC., 55 Lispenard St., New York 13. ADV. PG. 522.
 Electronic Supply, 40-14 Greenpoint, Long Island City.
 Electronic Wholesalers, 5047 Broadway, New York.
 Electronics Center, Inc., 118 Duane St., New York 7.
 Erskine-Healy, Inc., 420 St. Paul St., Rochester.
 Federal Radio Sales Supply Co., 188 State St., Binghamton.
 Federated Purchaser, Inc., 66 Dey St., New York 7.
 Fischer Distributing Co., Inc., 118 Duane St., New York 7.
 Fordham Radio Supply, 5669 Broadway, New York 63.
 Fort Orange Radio Distributing Co., 904 Broadway, Albany.
 Fulton County Distr. Co., 14 Bleeker St., Gloversville.
 Gem Electronics Distributors, Inc., 236 Broadway, Hicksville.
 Genesee Radio & Parts Co., 205 Genesee St., Buffalo 3.
 Gershoff Elect. Sup. Corp., 220 W. 83rd St., New York.
 Goler Elect. Sup. Corp., 225 S. Broadway, Yonkers.
 Graybar Electric Co., 420 Lexington Ave., New York.
 General Offices—branches in 105 principal cities.
 Green Tele-Radio Distributors, Inc., 472 Sutter Ave., Brooklyn 7.
 Greylock Electronics Supply Co., 156 Liberty St., New York 6.
 Harrison, Fred C., 108 W. Church St., Elmira.
 Harrison Radio Corp., 172-31 Hillside Ave., Jamaica, L. I.
 HARRISON RADIO CORP., 225 Greenwich St., New York 7. ADV. PG. 246.
 Harvey Radio Co., 103 W. 43rd St., New York 18.

Hoffman Electronic Corp., 253 E. 72nd St., New York.
 Hornbeam Distributing Co., 67-15 Fresh Pond Rd., Brooklyn.
 Hornbeam Distributing Co., 1630 Bedford Ave., Brooklyn.
 Hornbeam Distributing Co., 4117 Ft. Hamilton Pkway, Brooklyn 19.
 Hornbeam Distributing Co., 61-01 16th Ave., Brooklyn.
 HUDSON RADIO & TELEVISION CORP., 48 W. 48th St., New York. ADV. PG. 529.
 Hunter Electronics, 233 East Ave., Rochester.
 International Electronics Corp., 137 Hudson St., New York 13.
 Interstate Appliance Co., Inc., 600 Broadway, New York 12.
 Island Radio Distributors, 412 Fulton Ave., Hempstead.
 Jacobs, Rene M., 601 W. 26th St., New York.
 Johnson Radio & Elect. Equip. Co., 119 Hunt Rd., Jamestown.
 L & S Radio Sales Co., 132-134 North St., Middletown.
 Leeds Radio Company, 73 Vesey St., New York 7.
 Leonard Radio, Inc., 69 Cortlandt St., New York 7.
 Lust, Henry B., 310 W. 85th St., New York.
 Machlett & Son, E., 220 E. 23rd St., New York 10.
 Masline Radio & Electronics, 192-196 Clinton Ave., Rochester 4.
 McRae & Co., Inc., H. A. 137 River St., Troy.
 Melville Radio Corp., 160-13 Northern Blvd., Flushing.
 Melville Radio Corp., 317 Central Ave., White Plains.
 Mid-Hudson Electric Supply Corp., 408 Main St., Poughkeepsie.
 Midway Radio & Television, 60 West 45th St., New York.
 Miller Electric Co., 11 Hopper St., Utica.
 Milo Radio & Electronics Corp., 200 Greenwich St., New York.
 Morris Distributing Co., Inc., 1153 W. Fayette St., Binghamton.
 Morris Distributing Co., 412 S. Clinton St., Syracuse.
 National Radio Distributors, 1348 Southern Blvd., Bronx.
 National Radio Distributors Corp., 73-20 Northern Blvd., Jackson Heights.
 National Radio Parts Dist. Co., 611 New York Ave., Brooklyn 3.
 National Theatre Supply Co., 92-96 Gold St., New York.
 Newark Electric Co., Inc., 242 W. 55th St., New York.
 Niagara Falls Radio Equipment Co., 1363 Pierce Ave., Niagara Falls.
 Niagara Radio & Parts Co., 1518 Main St., Niagara Falls.
 Niagara Radio Supply Corp., 55 Vesey St., New York 7.
 Norman Radio Distributors, Inc., 94-29 Merrick Rd., Jamaica 5.
 O & W Radio Co., 141 Cedar St., New York.
 Peerless Electronic Distributors Corp., 76 Willoughby St., Brooklyn.
 Peerless Radio Distributors, Inc., 92-32 Merrick Rd., Jamaica.
 Pond Electric & Battery Service, Inc., 123 East Main St., Malone.
 Popper & Sons, Inc., 300 Fourth Ave., New York 10.
 Powell Radio Supply, 142 W. 169th St., New York 52.
 R. T. A. Distributors, Inc., 36 Broadway, Menands, Albany 4.
 Radelco, Inc., 246 W. First, Mt. Vernon.
 Radio Equipment Corp., Inc., 145-151 Genesee St., Buffalo 3.
 Radio Equipment Corp., 1363 Pierce Ave., Niagara Falls.
 Radio Supply Co., 200 Walton St., Syracuse.
 Radio Wire Television, Inc., 542 E. Fordham Rd., Bronx.
 Radio Wire Television, Inc., 100 Sixth Ave., New York 13.
 Radionic Equipment Co., 170 Nassau St., New York.
 Ray Distributing Co., 284 Glen St., Glens Falls.
 Ray Distributing Co., 55 W. Main Ave., Malone.
 Raytec, Inc., 140 Irving Ave., Port Chester.
 Reliance Distributors, Inc., 343 W. Jefferson St., Syracuse.
 Roberts & O'Brien, 714-716 Park Ave., Syracuse 4.
 Rochester Radio Supply Co., 114 St. Paul St., Rochester 4.
 Rotary Electronic Sales, 10 Grace Ave., Great Neck.
 Sanford Electronics Corp., 157 Chambers St., New York 7.
 Schwartz & Son, Morris, 710 Broadway, Schenectady.
 SCHWEBER ELECTRONICS, 122 Herricks Road, Mineola. ADV. PG. 587.
 Slate Co., 2755 Webster Ave., New York.
 Stage, Roy C., 265 Erie Blvd., West Syracuse.
 Starks & Co., George L., 8 Woodruff, Saranac Lake.
 Smith, Inc., Stewart, 325 E. Water St., Syracuse.
 Sonocraft Corp., 115 West 45th St., New York 19.
 Spectol Corp., 10 Bridge St., New York.
 Stallman of Ithaca, 123-131 S. Tioga St., Ithaca.
 Stan-Burn Radio & Electronics Co., 558 Coney Island Ave., Brooklyn 18.
 Stan-Burn Radio & Electronics Co., 1697 Broadway, New York 19.
 Standard Electronics Co., 1497 Main St., Buffalo 8.
 Standard Parts Corp., 277 N. Franklin St., Hempstead.
 STATE LABS., INC., 649 Broadway, New York. ADV. PG. 584.
 Strong Television Corp., 286 Main St., Farmingdale.
 Sun Radio & Electronics Co., Inc., 650 Fifth Ave., New York.
 Sylvan-Wellington Co., 269 Canal St., New York 13.
 Taylor Co., E. E., 465 Central Ave., Albany.
 Terminal Radio Corp., 85 Cortlandt St., New York.
 TIME ELECTRONIC SALES, 368 Broadway, New York. ADV. PG. 242.
 Trojan Radio Co., Inc., 426 River St., Troy.
 United Catalog Publishers, Inc., 106-110 Lafayette St., New York.
 United Radio & Electric Co., 47 W. 63rd St., New York 23.
 Veth Electric Co., 35 Genesee St., Utica.
 Vermont Hardware Co., Inc., 40 E. Main St., Malone.
 Vm Electric Co., 325 Gold St., Brooklyn.
 Walter's Electric Co., 740 Third Ave., New York.
 Westchester Electronic Supply Co., 420 Mamaroneck Ave., White Plains.

Western International Co., 55 Vesey St., New York 7.
 Wilco Radio Distributors, 383 E. 138th St., New York.
 WILGREEN INDUSTRIES, 99 Murray St., New York. ADV. PG. 387.
 Winchell, C. A., 37 Central Ave., Cortland.
 Yonkers Electronic Supply, 541 Nepperhan Ave., Yonkers.

NORTH CAROLINA

Carolina Radio Equipment Co., Inc., 105-107 E. Martin St., Raleigh.
 Dalton-Hege Radio Supply Co., 340 Bookstown Ave., Winston-Salem.
 Dixie Radio Supply Co., 715 W. Moorehead St., Charlotte.
 Eastern Radio Supply Co., 532 Hay St., Fayetteville.
 Freck Radio & Supply Co., Inc., 38 Biltmore Ave., Asheville.
 Glasgow Supply Co., 224 S. Cedar St., P. O. Box 1997, Charlotte 1.
 Johannesen Electric Co., Inc., 312-314 N. Eugene St., Greensboro.
 Lambeth Electric Supply Co., 100 Burke St., Winston-Salem.
 Long's Distributing Co., Inc., 12 Biltmore Ave., Asheville.
 Noland Co., Inc., 636 W. Fourth St., Winston-Salem.
 Radio Amateur Center, 411 Hillsboro St., Raleigh.
 Radiotronic Distributors Inc., 208 N. College St., Charlotte.
 Show Distributing Co., 205 W. First St., Charlotte.
 Signal Radio Supply, Goldsboro.
 Southeastern Radio Supply Co., 416 Market St., Greensboro.
 Southeastern Radio Supply Co., 411-15 Hillsboro St., Raleigh.
 Southern Radio Corp., 1625 W. Morehead St., P. O. Box 2356, Charlotte 1.
 Walker Martin, Inc., 449 Atonda Ave., Charlotte.
 Walker Martin, Inc., 287 Raleigh St., Greensboro.
 Walker Martin, Inc., 840 Poole Ave., Raleigh.
 Womack Electric, 319 Worth St., Burlington.
 Womack Electric, 304 S. Dillend, Durham.

NORTH DAKOTA

Bristol Distributing Co., 419 North Pacific Ave., Fargo.
 Dakota Electric Supply Co., 1017-23 Fourth Ave., N., Fargo.
 Hayer Co., F. C., 814 First Ave., North P. O. Box 1657, Fargo.
 Maytag Electric Co., Minot.
 Maytag Electric Co., Williston.
 McFall Radio Co., 58 N. Main St., Box 1055, Minot.
 Quannrud, Brink & Riebold, 122 First St., Bismarck.
 Radio Equipment Co., 624 Second Ave., N., Fargo.

OHIO

Akron Radio & TV Parts, 75 N. Case, Akron 5.
 Allied Supply Co., Inc., 359 W. Monument Ave., Dayton 2.
 Armstrong Radio Supply, 1261 Cleveland Ave. N., Canton 3.
 Bell Radio Supply, 527 N. Main St., Marlon.
 Bletzacker Electronics, Inc., 135 W. Chestnut St., Lancaster.
 Broadway Elect. Supply Co., 6209 Broadway, Cleveland.
 Burroughs Radio Co., 711 Second St., NW, Canton 3.
 Burroughs Radio Co., 218 E. Second St., Mansfield.
 Carnegie Radio Company, 3153 Carnegie Ave., Cleveland.
 Chilliocothe Hdwe. & Supplies, 21 E. 2nd St., Chilliocothe.
 Chambers Electronic Supply Co., Inc., 1667-71 Central Parkway, Cincinnati.
 D & R Radio Supply Co., Inc., 156 S. 3rd St., Steubenville.
 Eberle's Radio Supply, 522 W. Main St., Springfield.
 EI-A-Co., 235 Lodi St., Elyria.
 Electronics Supply Corp., 134 E. Long St., Columbus 15.
 Goldhamer, Inc., 2239 E. 14th St., Cleveland.
 H & W Auto Accessories Co., 713 Adams St., Toledo 2.
 Hamburg Brothers, 320 E. Federal St., Youngstown.
 Hausfeld Radio Supply, 116 N. 3d St., Steubenville.
 Herrlinger Distributing Co., 1436 Vine St., Cincinnati 10.
 Holub & Hogg, 1400 Sycamore St., Cincinnati.
 Howard's Electronic Supply, 135 17th St., Toledo 2.
 Hughes-Peters, Inc., 1128 Sycamore St., Cincinnati.
 Hughes-Peters, Inc., 111 E. Long St., Columbus 15.
 Hughes-Peters, Inc., 300 W. 5th St., Dayton.
 Hutch & Son, 125 S. Elizabeth St., Lima.
 Jantsen Radio Specialties, 136 Pine Ave. S. E., Warren.
 Lima Radio Parts Co., 600 N. Main St., Lima.
 Main Line Cleveland, Inc., 5005 Euclid Ave., Cleveland 3.
 Mainline Distributors, Inc., 374-384 S. Erie St., Toledo 2.
 Marietta Radio & Elect. Supply, 211 Second St., Marietta.
 Martin Co., M. H., 1118 Lincoln Way, Massillon.
 Mytron Co., The, 121 W. Central Pkwy., Cincinnati.
 Morrison's Radio Supply, 331 Center St., Astabula.
 Northern Ohio Laboratories, 2073 W. 85th St., Cleveland.
 Northwestern Radio Co., 116 W. Spring St., Lima.
 Ohio Appliance Inc., Daylight Bldg., 804-808 Sycamore St., Cincinnati 2.
 Ohio Appliances, Inc., 243 N. 4th St., Columbus.
 Ohio Appliances, Inc., 430 Leo St., Dayton 4.
 Oliver Theatre Supply Co., Inc., 1701 E. 23rd St., Cleveland.
 Olson Radio Warehouse, Inc., 73 E. Mill St., Akron 8.
 Olson Radio Warehouse, 2020 Euclid Ave., Cleveland.
 Pioneer Radio Supply Co., 2115 Prospect Ave., Cleveland 15.
 Progress Radio Supply Co., 413-415 Huron Rd., Cleveland.

Radio & Electronics Parts Corp., 3235 Prospect Ave., Cleveland 15.
 Radio Parts Co., 230 E. Boardman St., Youngstown.
 Radio & Refrigeration Supply Co., 1220 Jackson St., Cincinnati.
 Radio Specialties Co., 136 Pine Ave., SE, Warren.
 Ross Radio Co., 325 W. Federal St., Youngstown 3.
 Schuster Electric Co., The, 319 E. Eighth St., Cincinnati.
 Selectronic Supplies, Inc., 1013 Jefferson Ave., Toledo.
 Servex Distributing Co., 131 N. State St., Marion.
 Sommer Electric Co., 818 Third St., Canton 4.
 Sound Electronics Supplies, 7th & Findley St., Portsmouth.
 Sreppo, Inc., 135 E. 2nd St., Dayton 2.
 Standard Radio Springfield, Inc., 119 W. Main St., Springfield.
 Steinberg's Inc., 633 Walnut St., Cincinnati 2.
 Stotts Friedman Co., 420-22 S. Main St., Dayton 2.
 Sun Radio Co., The, 110 E. Market St., Akron 8.
 Thompson Radio Supplies, 182 E. Long St., Columbus 15.
 Thompson Radio Supplies, 135 S. 6th St., Zanesville.
 Toledo Radio Specialties, 1215 Jackson St., Toledo 2.
 United Radio, Inc., 1314 Vine St., Cincinnati.
 Warren Radio Co., 71 So. Broadway, Akron 8.
 Warren Radio Co., 222 S. Elizabeth, Lima.
 Warren Radio Co., 1320 Madison St., Toledo 2.
 Whitehead Radio Co., 124 E. Long St., Columbus 5.
 Winteradio, Inc., 1468 W. 25th St., Cleveland 13.

OKLAHOMA

Dulaney's, 825 N. W. Second St., Oklahoma City.
 Electronic Supply Co., 212 NW Tenth St., Oklahoma City 3.
 Industrial Electronic Supply Co., 1124 E. 4th St., Tulsa.
 Miller-Jackson Co., 111-119 E. California, Oklahoma City.
 Muskogee Electronic Supply Company, 231 Court St., Muskogee.
 Oklahoma Theatre Supply Co., 628 W. Grand Ave., Oklahoma City.
 Patterson Radio Supply Co., 211 E. 13th St., Tulsa.
 Radio, Inc., 1000 S. Main St., Tulsa 3.
 Radio Supply Inc., 724 N. Hudson St., Oklahoma City.
 S & S Radio Supply, 721 S. Detroit, Tulsa.

OREGON

Appliance Wholesalers, 600 NW 14th St., Portland 9.
 Bargeit Supply, 1131-35 SW Washington St., Portland 5.
 Carlson, Hatton & Hay, Inc., 96 E. Tenth Ave., Eugene.
 Central Distributors, 1131-33 S. W. Washington, Portland 5.
 Cressey & Allen, 35 Commercial St., Portland 6.
 Harper-Meggee, Inc., 1506 NW Irving, Portland 9.
 Hawthorne Electronics, 700 S. E. Hawthorne Blvd., Portland 14.
 Johnson Co., Inc., Lou, 1051 So. Commercial St., Salem.
 Johnson Co., Lou, 422 NW Eighth Ave., Portland.
 Northwest Radio Supply Co., Inc., 717 SW Akeny St., Portland.
 Pacific Stationery Wholesale Radio, 414 S. W. Second Ave., Portland.
 Portland Radio Supply Co., 825 S. E. Grand Ave., Portland.
 R F Supply Co., 2319 S. 6th St., Klamath Falls.
 Radio Electronics Co., 9th & Commercial, Astoria.
 Stubbs Electric Co., 33 NW Park Ave., Portland 9.
 Tracey & Co., Inc., 937 NW Gilson, Portland 9.
 United Radio Supply Inc., 179 W. 8th St., Eugene.
 United Radio Supply, Inc., 22 NW 9th Ave., Portland 9.
 Walker Co., Verl G., P. O. Box 1586, Medford.

PENNSYLVANIA

A. C. Radio Supply Co., 1539 W. Passyunk Ave., Philadelphia 45.
 A. G. Radio Parts Co., 3515 N. 17th St., Philadelphia 40.
 A. G. Radio Parts Co., 628 Schuylkill Ave., Reading.
 Allied Electric Appliance Parts Inc., 3640 Elder St., Philadelphia 40.
 Almo Radio Co., 509 Arch St., Philadelphia 23.
 Almo Radio Co., 6205 Market St., Philadelphia.
 Almo Radio Co., 412 N. 6th St., Philadelphia 23.
 B & R Electric Co., Railroad Ave., St. Marys.
 Baker Radio Electric, 111 Johns St., Johnstown.
 Barbey Co., Geo. D., 622 Columbia Ave., Lancaster.
 Barbey Co., Geo. D., 111 N. Washington St., Pottstown.
 Barbey Co., Geo. D., 2nd & Penn Sts., Reading.
 Barnett Bros. Radio Co., 117 N. 7th St., Philadelphia.
 Barno Radio Co., 321-6th Ave., McKeesport.
 Barron's Radio Supplies, 116 East Jefferson St., Butler.
 Bearer Electric Supply Co., 1017 Fifth St., New Kensington.
 Big Boys Auto Parts Co., 123-129 S. Second, Sunbury.
 Buss Radio Electric Supply, 61-63 E. Broad St., Bethlehem.
 Cambria Equipment Co., 17-27 Johns St., Johnstown.
 Cameradio Co., 963 Liberty Ave., Pittsburgh 22.
 Capitol Records Inc., Scranton.
 Consolidated Radio Co., 612 Arch St., Philadelphia 6.
 D & H Distributing Co., 311 S. Cameron St., Harrisburg.
 D & H Distributing Co., 251 S. Main St., Wilkes-Barre.
 Duncombe Co., J. V., 1011 W. 8th St., Erie.
 Elliott & Waddington, 116-118 N. Mercer St., New Castle.
 Emerson Radio of Pa., Inc., 223-225 N. Broad St., Philadelphia 7.
 Eshelman Supply Co., 110 N. Water St., Lancaster.
 Excelsior Radio Co., 17th & Derry Sts., Harrisburg.
 Federated Purchaser, Inc., 115 Hamilton St., Allentown.
 Federated Purchaser, Inc., 925 Northampton St., Easton.
 Fisher Scientific Co., 711-723 Forbes St., Pittsburgh 19.
 Fox, John, 2121 Market St., Philadelphia 4.

General Electronics Distributors, Inc., 120 E. Ottermans St., Greengrub.
 General Radio & Electronics, 287 S. Main St., Wilkes-Barre.
 Graybar Electric Co., 910 Cherry St., Philadelphia.
 Hamburg Bros., 213 Galveston Ave., Pittsburgh 22.
 Herbach & Rademan, Inc., 1204 Arch St., Philadelphia 7.
 Hollenback's Radio Supply, 2221 Eighth Ave., Altoona.
 J. R. S. Distributors, 646 W. Market St., York.
 Jordan Electronic Co., 1130 German St., Erie.
 Kennedy's Radio Supply, 1500 Seventh Ave., Altoona.
 Kratz Brothers, Cor. John & Oaks Sts., Norristown.
 Lazar Radio Co., Nat., 4241 Lancaster Ave., Philadelphia 4.
 Lectronic Research Labs., 715-19 Arch St., Philadelphia 6.
 Luckenback & Johnson, Inc., 1034 Chestnut St., Allentown.
 M & H Sporting Goods Co., 722 Market St., Philadelphia 6.
 Mansfield Co., M. V., 937 Liberty Ave., Pittsburgh.
 Marks Parts Co., 313 Braddock Ave., Braddock.
 Marshall Co., John, 201 Anderson St., Pittsburgh.
 Midwestern Electronic Supply Co., 241 West Grant St., New Castle.
 Motorola-Philadelphia Co., 120 S. 30th St., Philadelphia.
 Moyer Electronic Supply Co., 758 N. Locust St., Hazelton.
 Moyer Electronic Supply Co., Inc., 330 E. Norwegian St., Pottsville.
 Penn Electronics Parts Co., 5303 Frankford Ave., Philadelphia.
 Pep Boys, 32nd & Allegheny Ave., Philadelphia 32.
 Phipps Auto Stores, Dean, Harrison & Valley Sts., Avoca.
 Pierce-Phelps, Inc., 437 N. 5th St., Philadelphia.
 Pursell, Fred P., 548-550 Wyoming Ave., Scranton 3.
 Radio Distributing Co., 915 S. 13 St., Harrisburg.
 Radio Electric Serv. Co. of Pa., Inc., 1042 Hamilton St., Allentown.
 Radio Electric Service Co. of Pa., Inc., 916 Northampton St., Easton.
 Radio Electric Service Co. of Pa., Inc., 3412 Germantown Ave., Philadelphia.
 Radio Electric Service Co. of Pa., Inc., 5930 Market St., Philadelphia 43.
 Radio Electric Service Co. of Pa., Inc., NW Cor. 7th & Arch Sts., Philadelphia.
 Radio Parts Co., 325 Bedford St., Johnstown.
 Radio Parts Company, 17th & Venango Sts., Philadelphia.
 Radio Parts Co., 929 Liberty Ave., Pittsburgh.
 Radio Parts Co., 47 N. Gallatin Ave., Uniontown.
 Radio Service Co., 346 S. Main St., Wilkes-Barre.
 Reliable Motor Parts Co., 1700 Seventh Ave., Beaver Falls.
 Reliable Motor Parts Co., 402 Adams St., Rochester.
 Rosen & Co., Raymond, 32nd & Walnut Sts., Philadelphia.
 Rumsey Electric Co., 1007 Arch St., Philadelphia.
 Scranton Radio & Television Supply Co., 519-521 Mulberry St., Scranton 2.
 Scott Co., Charles B., 119 Franklin Ave., Scranton.
 Sharon Electronic Supply Co., 1344 East State St., Sharon.
 South Hills Electronic Supply Co., 1420 W. Liberty Ave., Pittsburgh.
 Steinberg & Co., Albert, 2520 N. Broad St., Philadelphia 32.
 Superior Distributing Co., 5124 Liberty Ave., Pittsburgh 24.
 Test Equipment Sales Co., Inc., 1505 Race St., Philadelphia.
 Tydings Co., 5800 Baum Blvd., Pittsburgh 6.
 Tydings Company, Inc., 305 Morgantown St., Uniontown.
 Wall, R. B., 58 East St., Wilkes-Barre.
 Warren Radio, Inc., 1125 State St., Erie.
 Wile, Eugene G., 218 S. 11th St., Philadelphia.
 Williamsport Radio Supply, 518 W. Third St., Williamsport 28.
 York Radio & Refrigeration, 519 W. King St., Lancaster.
 York Radio & Refrigeration Parts, 265 W. Market St., York.
 Young Bros. Electronics Inc., 1909-15 Peach St., Erie.
 Zimmerman Wholesalers, 55 Morgantown St., Uniontown.

RHODE ISLAND

Dandreta Co., Wm., 129 Regent St., Providence.
 DeMambo Radio Supply, Inc., 90 Broadway, Providence.
 Eddy & Co., Inc., 43 Hospital St., Providence.
 Edwards Co., W. H., 94 Broadway, Providence 3.

SOUTH CAROLINA

Carolina Radio Supply Co., Inc., 227 W. Washington St., Greenville.
 Dixie Radio Supply Co., 1715 Main St., Columbia.
 Dixie Radio Supply Co., 22 Richardson St., Greenville.
 Florence Radio Supply, Inc., 223-27 E. Cheves St., Florence.
 Gilliam Radio Co., 117 W. Coffee St., Greenville.
 McElhenney Radio Supply House, 196 St. John St., Spartanburg.
 Noland Co., Inc., 162 Morgan Ave., Spartanburg.
 Radio Laboratories, 215 King St., Charleston.
 Southeastern Radio Parts Co., 1513 Taylor St., Columbia.
 Wholesale Radio Supply Co., 78½ Calhoun St., Charleston 11.

SOUTH DAKOTA

Burghardt Radio Supply, 602 S. Main St., Aberdeen.
 Burghardt Radio Supply, 12 N. Broadway, NW, Watertown.
 Power City Radio Co., 513 Seventh St., Rapid City.
 Power City Radio Co., 209 S. First Ave., Sioux Falls.
 Warren Radio Supply, 115 S. Indiana Ave., Sioux Falls.

TENNESSEE

Bluff City Distributing Co., Inc., 905-7 Union St., Memphis 3.
 Bomar Appliance Co., Inc., 520 Western Ave., Knoxville.
 Boyd Electronic Supply, 1153 Union Ave., Memphis.
 Braid Electric Co., 1100 Demonbreun St., South, Nashville.
 Chemcity Radio & Elec. Co., 1019 Bristol Highway, Kingsport.
 Chemcity Radio & Electric Co., 12 Emory Park, Knoxville 17.
 Curle Radio Supply, 825 Cherry St., Chattanooga.
 Currey's 109-16th Ave., Nashville.
 Electra Distributing Co., 1914 West End Ave., Nashville 4.
 Hahn Electronic Supply Corp., 350 East Scott St., Knoxville.
 Interstate Hardware Co., Inc., Bristol.
 Keith-Simmons Co., Inc., Cummins Station, Nashville.
 Lavender Radio Supply Co., Inc., 1012 Union Ave., Memphis.
 Lynch & Co., Inc., S. H., 1049 Union, Memphis.
 McClung & Co., Inc., C. M., 501 W. Jackson St., Knoxville 7.
 McGregor's Inc., 1071 Union Ave., Memphis 3.
 Mills-Morris Co., 171-175 S. Ludley St., Memphis 1.
 Orgill Brothers & Co., 10-56 West Calhoun Ave., Memphis.
 Radio & Appliance Corp., 4 Cummins Station, Nashville 3.
 Radio & Appliance Dist., Inc., Corner Main & Broad Sts., Chattanooga.
 Radio Electric Supply Co., 210 Cherokee St., Kingsport.
 Randolph & Cole, Inc., 1516 Church St., Nashville.
 Roden Electrical Supply Co., 808 N. Central Ave., Knoxville.
 Rush Co., L. K., 103 Highland Ave., Jackson.
 Shobe, Inc., 1195 Union Ave., Memphis.
 Specialty Distributing Co., Inc., 709 Chestnut St., Chattanooga.
 W & W Distributing Co., 677 Madison Ave., Memphis.
 Woodson & Bozeman, Inc., 482 Union Ave., Memphis.

TEXAS

Adleta Co., 1914 Cedar Springs at Akard, Dallas.
 All-State Distributing Co., 2407 Foss Ave., Dallas 1.
 Amateur Headquarters & Supply Co., 828 Brooklyn Ave., San Antonio.
 Amateur Radio Supply Co., 510 Broadway, San Antonio.
 Automatic Sales Co., 325 M & M Bldg., Houston 2.
 Beyer & Co., A. R., 1318 Polk Ave., Houston 2.
 Busacker Electronic Equip. Co., 1721 Waugh Drive, Houston.
 Carver Sound Equipment Co., Inc., 1408 S. Akard St., Dallas.
 Clark & Gose Radio Supply, 1204-B Ohio Ave., Wichita Falls.
 Crabtree's Wholesale Radio, 2608 Ross Ave., Dallas 1.
 Dallas Electric Supply Co., 1800 Magnolia St., Dallas 2.
 Denison Radio Supply, 310 W. Woodward, Denison.
 Electronic Communications, 1310 McKinney Ave., Houston.
 Electronic Equipment Co., 917-919 Florence St., Fort Worth.
 Electronic Equipment & Engineering Co., 1152 E. Madison Sts., Brownsville.
 Electronic Equipment & Eng. Co., 805 S. Staples St., Corpus Christi.
 Fort Worth Radio Supply Co., 1201 Commerce St., Fort Worth.
 Geophysical Supply Co., PO Box 2214, Houston 1.
 Guarantee Radio Supply Co., 1314 Iturbide St., Laredo.
 Gunter Distributing Co., San Angelo.
 H & L Radio Supply Co., 318 Commerce St., Fort Worth.
 Hall, Inc., R. C. & L. F., 1219 Caroline Ave., Houston.
 Hargis Co., Box 716, Austin.
 Hargis Co., Inc., 1205 Washington Ave., Waco.
 Harrison Equipment Co., 1422 San Jacinto, Houston.
 Houston Radio Supply Co., Inc., Clay at La Branch, Houston.
 Industrial Elect. Supply Co., 134 Leslie St., Dallas.
 Lavender Radio Supply Co., 520 E. 4th St., Texarkana.
 Lavender Radio Supply Co., 503 E. Oakwood St., Tyler.
 Lenert Company, 2213 Congress St., Houston 3.
 L & M Sales, 1307 Austin Ave., Waco.
 Lynch & Co., Inc., S. H., 2101-3 Pacific Ave., Dallas.
 Lynch & Co., Inc., S. H., 910 Calhoun St., Houston.
 Lynch & Co., Inc., S. H., 241 Broadway, San Antonio.
 Midland Specialty Co., 425 W. San Antonio St., El Paso.
 Mission Radio Inc., 521 Broadway, San Antonio.
 Modern Radio Supply Co., 635 Soledad, San Antonio.
 Momsen-Dunnegan-Ryan Co., 800 E. Overland St., El Paso.
 Montague Radio Distributing Co., 760 Laurel St., Beaumont.
 Mooney Radio Supply Co., 1635 Huff, Wichita Falls.
 R & R Electronic Co., 107 N. First St., N. Walnut, Abilene.
 R & R Electronic Co., 416-18 W. Tenth, Amarillo 1.
 R & R Supply Co., Inc., 706 Main St., Lubbock.
 Radio Parts Co., 902 Crawford, Houston 3.
 Radio Service Supply Co., 111 University Pl., Tyler.
 Ra-Tel, Inc., 2409 Ross Ave., Dallas 1.
 Radio & Television Parts Co., 118-120 7th St., San Antonio 2.
 Reeves Radio Supply, 720 N. Stanton St., El Paso.
 Rio Supply Co., PO Box 168, McAllen.
 "Scooters" Radio Supply, 509-11 Commerce St., Fort Worth.
 Shield Co., Inc., 1010 Macon St., Fort Worth.
 South Texas Radio Supply, 307 S. Presa St., San Antonio.
 Southern Radio Supply Co., 3221 Ross Ave., Dallas.
 Southwest Radio Supply, 1820 N. Harwood St., Dallas.
 Southwest Radio & Sound Equipment Co., 635 S. Flores St., San Antonio.
 Southwestern Theatre Equipment Co., Inc., 2010 Jackson St., Dallas 1.

Southwestern Theatre Equipment Co., Inc., 1416 Main St., Houston 2.
Standard Radio Supply Inc., 309 Lavaca St., Austin.
Sterling Radio Parts Co., 1602 McKinney St., Houston.
Straus-Frank Co., 4000 Leeland, Houston.
Straus-Frank Co., 301 S. Flores St., San Antonio.
Sutton's Wholesale Electronics, Bill, 601 Commerce St., Fort Worth 2.
Walz Company, W. G., 500 San Francisco St., El Paso.
Wanslow & Co., 912 N. Peak St., Dallas.
West Texas Radio Supply, 1026 West Sixth, Amarillo.
White's Auto Stores, 1507 Lamar St., Wichita Falls.
Wholesale Elect. Supply Co., 3002 Ross Ave., Dallas.
Wicks-DeVilbiss Co., 513-15 S. Staples St., Corpus Christi.
Wilkinson Brothers, 2406 Ross Ave., Dallas.

UTAH

Ballard & Carter Co., 2426 Grant Ave., Utah.
Central Supply Co., 47 E. 5th St., Salt Lake City.
Flint Distributing Co., 316 Second South, PO Box 1470, Salt Lake City 11.
Standard Supply Co., Box 1047, Salt Lake City.
O'Laughlin's Radio Supply, 113 E. 3rd So. St., Salt Lake City.
Radio Supply Co., 157 Motor Ave., Salt Lake City.

VERMONT

Hagar Hardware & Paint, 164-170 St. Paul, Burlington.
Vermont Hardware Co., Inc., 180 Flynn Ave., Burlington.
Vermont Hardware Co., Main & Bridge Sts., White River Junction.

VIRGINIA

Auto Spring & Bearing Co., Inc., 116-118 Chuck Ave., W., Roanoke.
Baker Sales Co., Inc., H. C., 19 Franklin Road, Roanoke.
Bristol Radio Supply Corp., 31 Moore St., Bristol.
Eastern Electric Co., 920 Commerce St., PO Box 943, Lynchburg.
Hartley & Co., M. A., 327 N. Central Ave., Staunton.
J & J Appliance Co., 211 William St., Fredericksburg.
Johnston-Gasser Co., 3023 W. Marshall St., Richmond 21.
Leonard Electronic Supply Co., 131 Center Ave., NW, Roanoke.
Leonard Electronic Supply Co., 23 N. Braddock, Winchester.
Lynchburg Battery & Ignition, 406 Fifth St., Lynchburg.
Noland Co., Inc., 27th St., & Virginia Ave., Newport News.
Radio Equipment Co., 821 W. 21st St., Norfolk 10.
Radio Parts Distributing Co., 128 W. Olney Rd., Norfolk 10.

Radio Supply, 711 Granby St., Norfolk 10.
Radio Supply Co., 3302 W. Broad St., Richmond 21.
Rucker Radio Wholesalers, 1906 N. Moore St., Arlington.
Southern Electric Co., 14 E. Johnson St., Staunton.
Virginia Battery & Ignition, Inc., 35 East Bank, Petersburg.
Winfree Supply Co., 800 W. Cary St., Richmond 21.
Womack Radio Supply Co., 502-504 Craghead St., Danville.
Wyatt-Cornick Distributors, Inc., 951 W. 21st St., Norfolk.
Wyatt-Cornick Inc., 14th & Grace Sts., Richmond 19.

WASHINGTON

Alaska Radio Supply Co., Inc., 2701 California Ave., Seattle 6.
Associated Industries, 1752 Rainier Ave., Seattle 44.
Coast Radio Corp., 110 University St., Seattle.
Columbia Electric & Mfg. Co., South 123 Wall St., Spokane 8.
C & G Radio Supply, 2502 Jefferson Ave., Tacoma 2.
Garrison Radio Supply, Second & Bell Sts., Seattle.
General Radio Inc., 100 Wall St., Seattle 1.
Harper-Meggee, Inc., 960 Republican, Seattle 9.
Harper-Meggee, Inc., 734 N. Division St., Spokane.
Kar Radio & Electric Co., PO Box 676, Walla Walla.
Lay & Nord, 112 S. Second St., Yakima.
Modern Theatre Supply, Inc., 2400 Third Ave., Seattle 1.
Northern Electric Co., 314 Bell St., Seattle.
Northwest Electronics, Inc., North 102 Monroe St., Spokane.
Pringle Radio Wholesale, 417 King St., Wenatchee.
Pringle Radio Wholesale Co., Rte 5, Box 750B, Everett.
Radio-Electric Supply Co., 2722 Second Ave., Seattle 1.
Radio Products Sales Co., 1214 First Ave., Seattle.
Radio Television & Appliance, Inc., 510 Westlake Ave., N., Seattle 9.
Sargent, Myron J., N. 2604 Wall St., Spokane.
Seattle Radio Supply Inc., 2117 2nd Ave., Seattle 1.
Spokane Radio Supply, 305 W. 2nd Ave., Spokane.
Standard Sales Co., 1219 W. First Ave., Spokane 8.
Stewart Co., A. T., 743 Broadway, Tacoma.
Waitkus Supply Co., 110 Grand Ave., Bellingham.
Washington Distributors, 115 Madison Ave., Seattle.
Western Electronic Supply Co., 717 Dexter Ave., Seattle 9.
Wible Radio Supply Co., 907 S. Tacoma Ave., Tacoma 3.
Yakima Wholesale Radio Co., 506 S. First, Yakima.
Zobrist Co., Herb E., 2125 Westlake Ave., Seattle 1.

WEST VIRGINIA

Chemcity Radio & Elec. Co., 103 Clendenin St., PO Box 2066, Charleston.
Electronic Supply Co., 422 11th St., Huntington 1.
General Electronics Distributors, Inc., 26 Tenth St., Wheeling.

Hicks Radio Supply Co., 10 Virginia St., E., Charleston.
King & Irwin, Inc., 314 Eleventh St., Huntington.
Meyers Electronics, Inc., 813 Bluefield Ave., Bluefield.
Mountain Electronics Co., Inc., 708 Bigley Ave., Charleston.
Randle & Hornbrook 536 7th St., Parkersburg
TV Supply Co., 1226 Third Ave., Huntington 1.
Trenton Radio Co., 414 Clark St., Clarksburg.
Trenton Radio Co., 300 Grant Ave., Morgantown.
Van Zandt Supply Co., 1123 4th Ave., Huntington.
Wheeling Radio Supply, 924 Market St., Wheeling.
White Electric Co., 903 West Pike St., Clarksburg.
Whithead Radio Co., Inc., 813 Bluefield Ave., Bluefield.

WISCONSIN

Acme Radio Supply Corp., 510 W. State St., Milwaukee 3.
Appleton Radio Supply Co., 1217 N. Richmond St., Appleton.
Central Radio Parts Co., 1723 W. Fond du Lac Ave., Milwaukee 5.
Electro-Plance Distributors, Inc., 2458 W. Lisbon Ave., Milwaukee 5.
Harris Radio Corp., 115 N. Tenth St., Manitowoc.
Larson Electronic Co., J. H., 402 Water St., Eau Claire.
Lingnor & Co., Frank, 934 S. 5th St., Milwaukee 7.
Marsh Radio Supply Co., 838 N. Fourth St., Milwaukee 3.
Neslo Electronic Distributors, 303 N. Chestnut St., Green Bay.
Northern Electrical Distributors, 708 S. Broadway, Green Bay.
Northern Radio & Telev. Co., 708 So. Broadway, Green Bay.
Popkey Co., G. M., 716 Main St., Green Bay.
Popkey Co., G. M., Main at Ninth St., Marinette.
Radio Distributors, 701 E. Johnson St., Madison 3.
Radio Parts Co., Inc., 538 W. State St., Milwaukee 3.
Radio Service & Supply Co., Inc., 615 Third St., Wausau.
S. M. Supply Co., 409-11 S. Barstow St., Eau Claire.
Satterfield Radio Supply Co., 326 W. Gorham St., Madison.
Seemuth Distributing Div., Electro-Plance Dists., Inc., 2406 W. Lisbon Ave., Milwaukee.
Standard Radio Parts Co., 1244 State St., Racine.
Stark Radio Supply Co., 133 South Sixth St., La Crosse.
Superior Radio Parts, 908 State St., Racine.
Taylor Electric Co., 112 N. Broadway, Milwaukee 2.
Television Parts, Inc., 714 State St., Milwaukee.
Valley Radio Distributors, 518 N. Appleton St., Appleton.

WYOMING

Casper Supply Co., 444-448 S. Center St., Casper.
Houge Radio & Supply, 2008 Carey Ave., Cheyenne.

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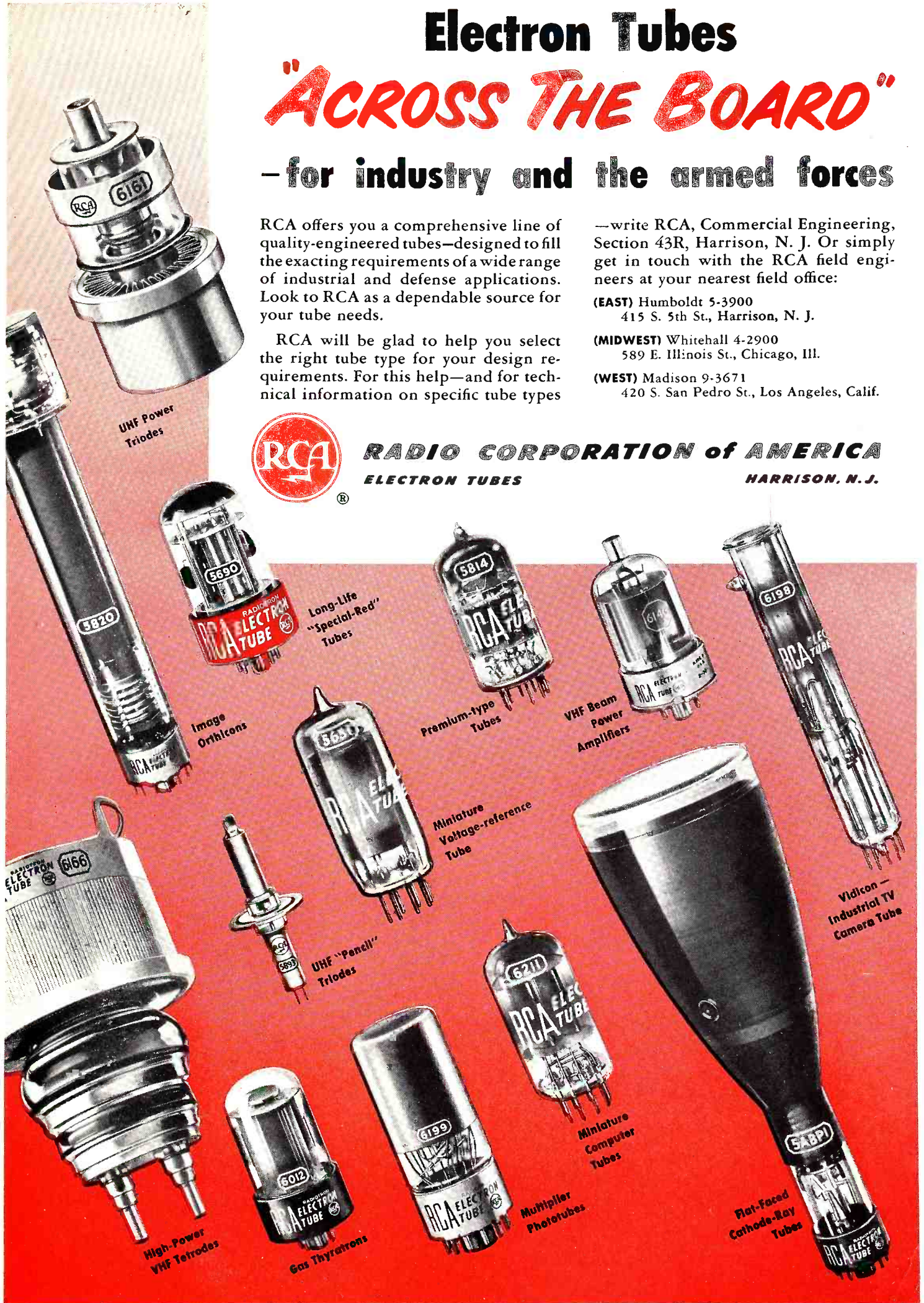
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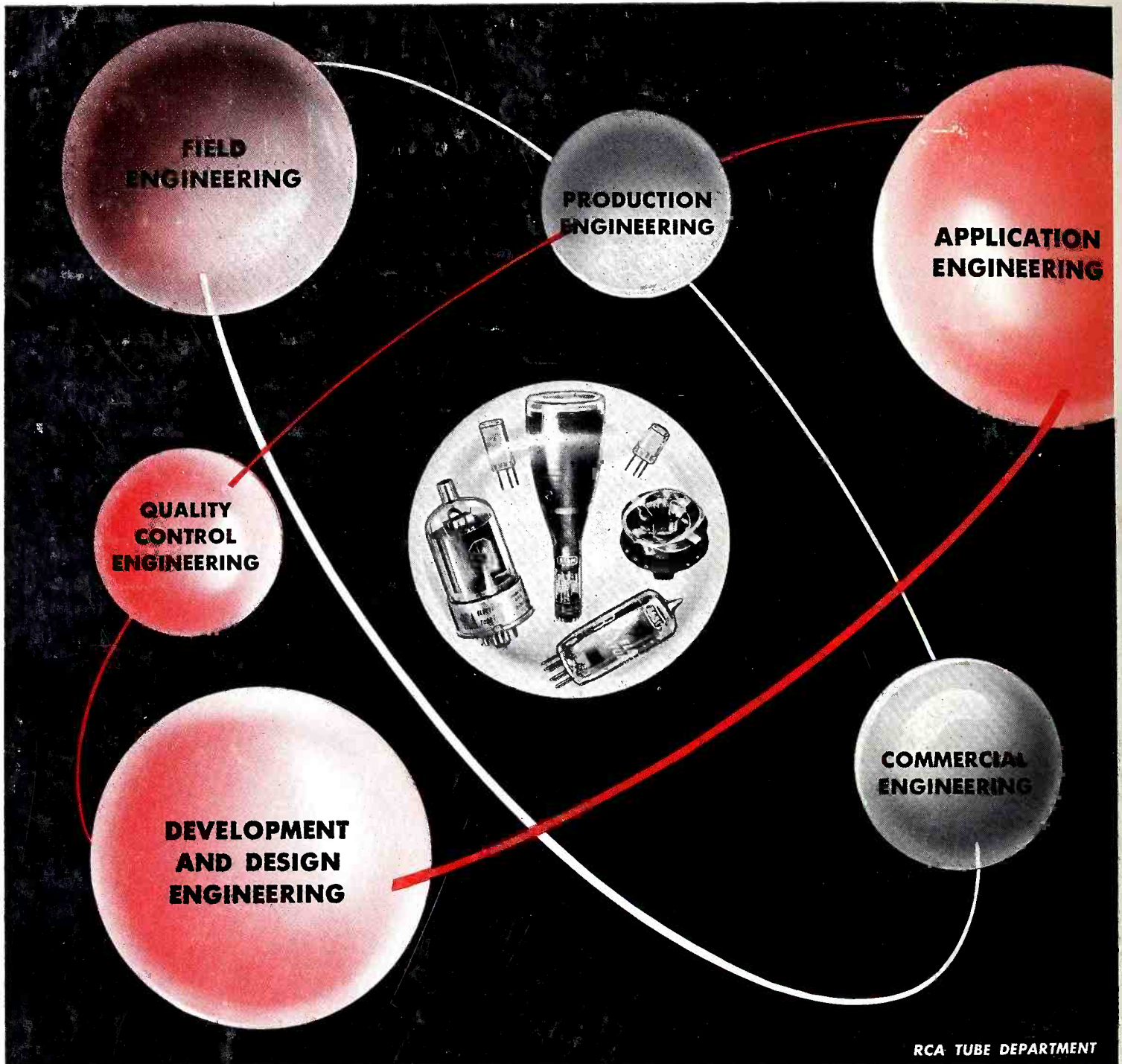
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